

Buy
STC

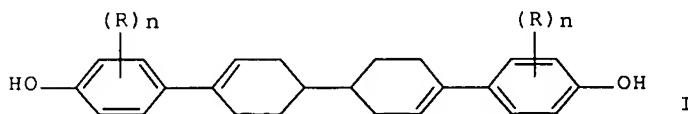
10531358

INVENTOR SEARCH

=> d ibib abs hitstr 16 1-1

L6 ANSWER 1 OF 1 HCPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2004:354897 HCPLUS Full-text
 DOCUMENT NUMBER: 140:357058
 TITLE: Preparation of novel 4,4'-
 bis(hydroxyphenyl)bicyclohexene and its derivatives
 INVENTOR(S): Satomi, Kouji; Oono, Hiroyasu;
 Ekawa, Kenji
 PATENT ASSIGNEE(S): Honshu Chemical Industry Co., Ltd., Japan
 SOURCE: PCT Int. Appl., 20 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004035513 W: JP, US	A1	20040429	WO 2003-JP13222	20031016
US 2006129001	A1	20060615	US 2005-531358 JP 2002-302887	20050929 A 20021017
PRIORITY APPLN. INFO.:			WO 2003-JP13222	W 20031016
OTHER SOURCE(S):	CASREACT 140:357058; MARPAT 140:357058			
GI				



AB Novel 4,4'-bis(hydroxyphenyl)bicyclohexenes (I; R = C1-4 alkyl; n = an integer of 0-3) are produced by thermally decomposing 4,4,4',4'-tetrakis(hydroxyphenyl)bicyclohexanes preferably in the presence of an alkaline catalyst. The 4,4'-dihydroxyphenyl-bicyclohexenes are useful as synthetic resin materials for liquid crystal polyester, polycarbonate, polyurethane and the like, or materials for photoresists of display devices, semiconductors and the like. Thus, phenol was condensed with 4,4'-bicyclohexanone in the presence of dry HCl, dodecyl mercaptan, and methanol at 40° for 20 h to give 89.6% 4,4,4',4'-tetrakis(4-hydroxyphenyl)-1,1'-bicyclohexane which was heated in tetraethylene glycol in the presence of NaOH under reduced pressure (3.0 kpa) with removal of water at 203° for 3 h followed by neutralization with acetic acid to pH 6.0 to give 73.4% 4,4,4',4'-tetrakis(4-hydroxyphenyl)-1,1'-bicyclohex-3-ene.

IT 1310-73-2, Sodium hydroxide, uses

RL: CAT (Catalyst use); USES (Uses)

(preparation of 4,4'-bis(hydroxyphenyl)bicyclohexene by thermal decomposition of

4,4,4',4'-tetrakis(hydroxyphenyl)bicyclohexane in presence of alkaline catalyst

RN 1310-73-2 HCAPLUS

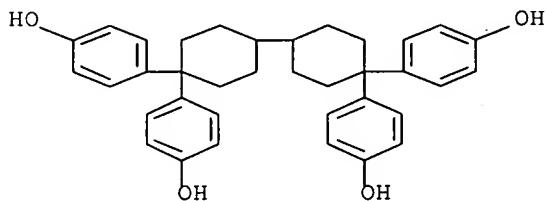
CN Sodium hydroxide (Na(OH)) (9CI) (CA INDEX NAME)

Na—OH

IT 256345-92-3P, 4,4,4',4'-Tetrakis(4-hydroxyphenyl)-1,1'-bicyclohexane 256345-93-4P, 4,4,4',4'-Tetrakis(3-methyl-4-hydroxyphenyl)-1,1'-bicyclohexane 256345-96-7P, 4,4,4',4'-Tetrakis(3,5-dimethyl-4-hydroxyphenyl)-1,1'-bicyclohexane 682759-50-8P, 4,4,4',4'-Tetrakis(3-isopropyl-4-hydroxyphenyl)-1,1'-bicyclohexane 682759-51-9P, 4,4'-Bis(3-isopropyl-4-hydroxyphenyl)-1,1'-bicyclohex-3-ene
 RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation of 4,4'-bis(hydroxyphenyl)bicyclohexene by thermal decomposition of 4,4,4',4'-tetrakis(hydroxyphenyl)bicyclohexane in presence of alkaline catalyst)

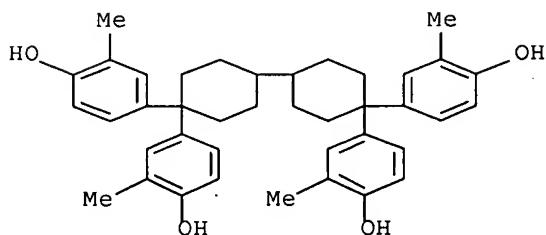
RN 256345-92-3 HCAPLUS

CN Phenol, 4,4',4'',4'''-[1,1'-bicyclohexyl]-4,4'-diylidenetetrakis- (9CI) (CA INDEX NAME)



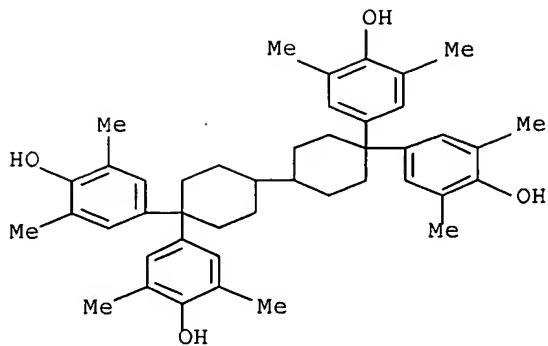
RN 256345-93-4 HCAPLUS

CN Phenol, 4,4',4'',4'''-[1,1'-bicyclohexyl]-4,4'-diylidenetetrakis[2-methyl- (9CI) (CA INDEX NAME)]



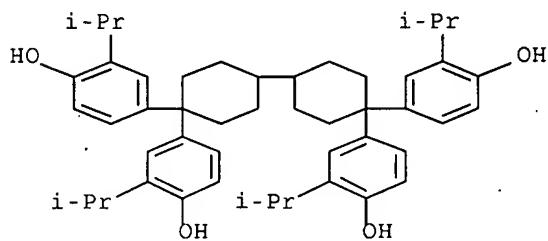
RN 256345-96-7 HCAPLUS

CN Phenol, 4,4',4'',4'''-[1,1'-bicyclohexyl]-4,4'-diylidenetetrakis[2,6-dimethyl- (9CI) (CA INDEX NAME)]



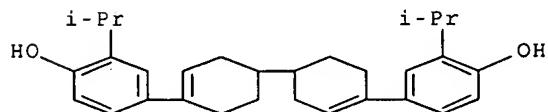
RN 682759-50-8 HCAPLUS

CN Phenol, 4,4',4'',4'''-[1,1'-bicyclohexyl]-4,4'-diylidene[2-(1-methylethyl)- (9CI) (CA INDEX NAME)



RN 682759-51-9 HCAPLUS

CN Phenol, 4,4'-[bi-3-cyclohexen-1-yl]-4,4'-diylbis[2-(1-methylethyl)- (9CI) (CA INDEX NAME)



IT 682759-48-4P, 4,4'-Bis(4-hydroxyphenyl)-1,1'-bicyclohex-3-ene

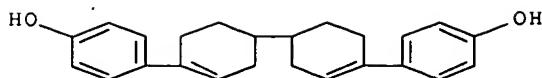
682759-49-5P, 4,4'-Bis(3-methyl-4-hydroxyphenyl)-1,1'-bicyclohex-3-ene 682759-54-2P, 4,4'-Bis(3,5-dimethyl-4-hydroxyphenyl)-1,1'-bicyclohex-3-ene

RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)

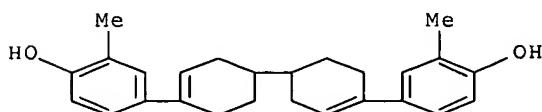
(preparation of 4,4'-bis(hydroxyphenyl)bicyclohexene by thermal decomposition of
 4,4,4',4'-tetrakis(hydroxyphenyl)bicyclohexane in presence of alkaline catalyst)

RN 682759-48-4 HCAPLUS

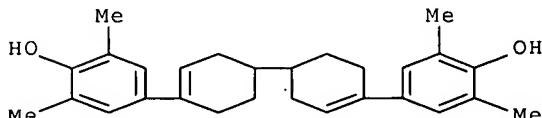
CN Phenol, 4,4'-[bi-3-cyclohexen-1-yl]-4,4'-diylbis- (9CI) (CA INDEX NAME)



RN 682759-49-5 HCAPLUS
 CN Phenol, 4,4'-[bi-3-cyclohexen-1-yl]-4,4'-diylbis[2-methyl- (9CI) (CA INDEX NAME)]

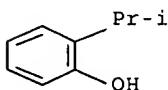


RN 682759-54-2 HCAPLUS
 CN Phenol, 4,4'-[bi-3-cyclohexen-1-yl]-4,4'-diylbis[2,6-dimethyl- (9CI) (CA INDEX NAME)]

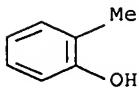


IT 88-69-7, o-Isopropylphenol 95-48-7, o-Cresol, reactions
 108-95-2, Phenol, reactions 576-26-1, 2,6-Xylenol
 23391-99-3, 4,4'-Bicyclohexanone
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of 4,4'-bis(hydroxyphenyl)bicyclohexene by thermal decomposition of
 4,4,4',4'-tetrakis(hydroxyphenyl)bicyclohexane in presence of alkaline catalyst)

RN 88-69-7 HCAPLUS
 CN Phenol, 2-(1-methylethyl)- (9CI) (CA INDEX NAME)



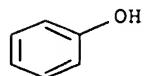
RN 95-48-7 HCAPLUS
 CN Phenol, 2-methyl- (9CI) (CA INDEX NAME)



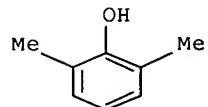
RN 108-95-2 HCAPLUS

10/531,358

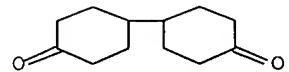
CN Phenol (8CI, 9CI) (CA INDEX NAME)



RN 576-26-1 HCAPLUS
CN Phenol, 2,6-dimethyl- (9CI) (CA INDEX NAME)



RN 23391-99-3 HCAPLUS
CN [1,1'-Bicyclohexyl]-4,4'-dione (9CI) (CA INDEX NAME)

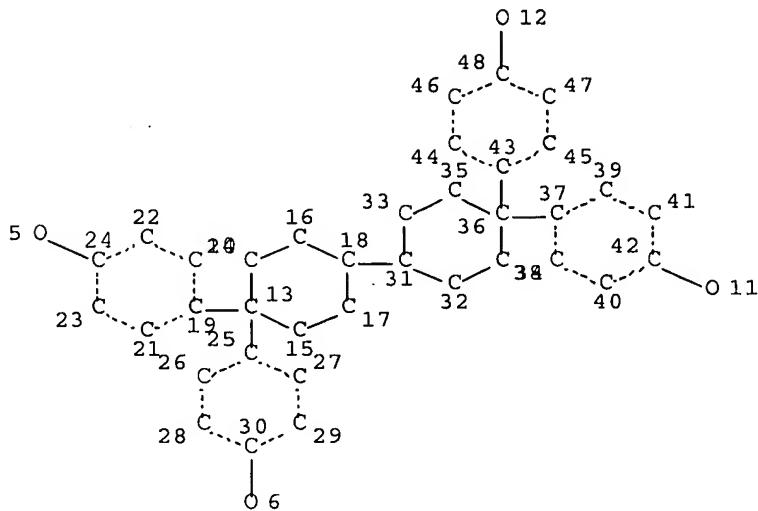


REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

SEARCH FOR "GENERAL FORMULA 2" in REGISTRY AND CAPLUS

=> d que stat 129

L23 STR



NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 40

STEREO ATTRIBUTES: NONE

L25 4 SEA FILE=REGISTRY SSS FUL L23
 L26 2 SEA FILE=HCAPLUS ABB=ON L25
 L27 2 SEA FILE=HCAPLUS ABB=ON L26 AND (PRD<20050929 OR PD<20050929)

 L28 1 SEA FILE=USPATFULL ABB=ON L26 AND (PRD<20050929 OR PD<20050929
)
 L29 3 DUP REMOV L27 L28 (0 DUPLICATES REMOVED)

=> d ibib abs hitstr 129 1-3

L29 ANSWER 1 OF 3 USPATFULL on STN

ACCESSION NUMBER: 2006:152560 USPATFULL Full-text
 TITLE: Novel 4,4'-dihydroxyphenyl bicyclohexenes
 INVENTOR(S): Satomi, Kouji, Wakayama, JAPAN
 Oono, Hiroyasu, Wakayama, JAPAN
 Ekawa, Kenji, Wakayama, JAPAN

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2006129001	A1	20060615
APPLICATION INFO.:	US 2003-531358	A1	20031016 (10)
	WO 2003-JP13222		20031016
			20050929 PCT 371 date

NUMBER DATE

PRIORITY INFORMATION: JP 2002-200302887 20021017 <--
 DOCUMENT TYPE: Utility
 FILE SEGMENT: APPLICATION
 LEGAL REPRESENTATIVE: KNOBBE MARTENS OLSON & BEAR LLP, 2040 MAIN STREET,
 FOURTEENTH FLOOR, IRVINE, CA, 92614, US
 NUMBER OF CLAIMS: 20
 EXEMPLARY CLAIM: 1
 LINE COUNT: 477

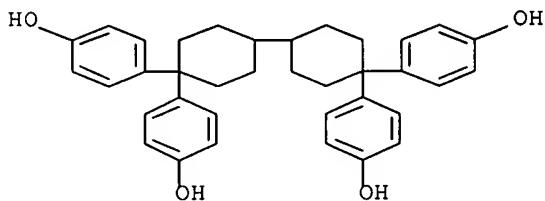
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Produce new 4,4'-dihydroxyphenyl bicyclohexenes that are useful as a material for liquid crystal polyester, polycarbonate, polyurethane or other synthetic resins or for photoresist used with display elements, semiconductors, etc., by thermally decomposing 4,4,4'4'-tetrahydroxyphenyl bicyclohexanes, preferably in the presence of alkali catalyst.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

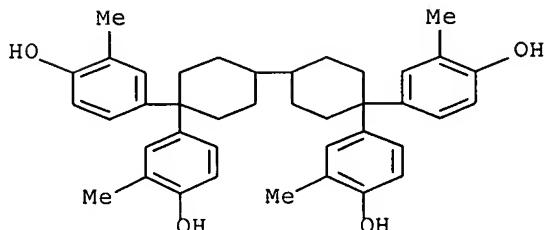
IT 256345-92-3P, 4,4,4',4'-Tetrakis(4-hydroxyphenyl)-1,1'-bicyclohexane 256345-93-4P, 4,4,4',4'-Tetrakis(3-methyl-4-hydroxyphenyl)-1,1'-bicyclohexane 256345-96-7P, 4,4,4',4'-Tetrakis(3,5-dimethyl-4-hydroxyphenyl)-1,1'-bicyclohexane 682759-50-8P, 4,4,4',4'-Tetrakis(3-isopropyl-4-hydroxyphenyl)-1,1'-bicyclohexane
 (preparation of 4,4'-bis(hydroxyphenyl)bicyclohexene by thermal decomposition of 4,4,4',4'-tetrakis(hydroxyphenyl)bicyclohexane in presence of alkaline catalyst)

RN 256345-92-3 USPATFULL

CN Phenol, 4,4',4'',4'''-[1,1'-bicyclohexyl]-4,4'-diylidenetetrakis- (9CI)
 (CA INDEX NAME)

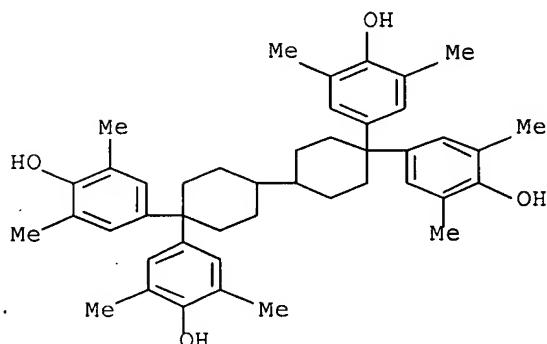
RN 256345-93-4 USPATFULL

CN Phenol, 4,4',4'',4'''-[1,1'-bicyclohexyl]-4,4'-diylidenetetrakis[2-methyl- (9CI) (CA INDEX NAME)]



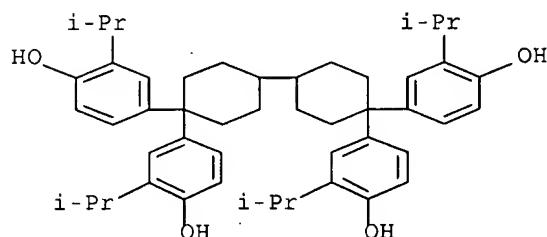
RN 256345-96-7 USPATFULL

CN Phenol, 4,4',4'',4'''-[1,1'-bicyclohexyl]-4,4'-diylidenetetrakis[2,6-dimethyl- (9CI) (CA INDEX NAME)



RN 682759-50-8 USPATFULL

CN Phenol, 4,4',4'',4'''-[1,1'-bicyclohexyl]-4,4'-diylidenetetrakis[2-(1-methylethyl)- (9CI) (CA INDEX NAME)



L29 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:354897 HCAPLUS Full-text

DOCUMENT NUMBER: 140:357058

TITLE: Preparation of novel 4,4'-

bis(hydroxyphenyl)bicyclohexene and its derivatives

INVENTOR(S): Satomi, Kouji; Oono, Hiroyasu; Ekawa, Kenji

PATENT ASSIGNEE(S): Honshu Chemical Industry Co., Ltd., Japan

SOURCE: PCT Int. Appl., 20 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

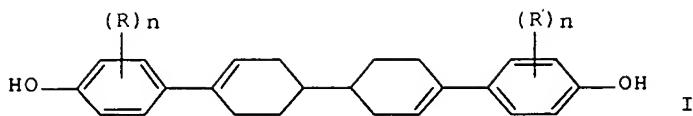
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004035513	A1	20040429	WO 2003-JP13222	20031016 <--
W: JP, US				
US 2006129001	A1	20060615	US 2005-531358	20050929 <--
PRIORITY APPLN. INFO.:			JP 2002-302887	A 20021017 <--
			WO 2003-JP13222	W 20031016 <--
OTHER SOURCE(S):	CASREACT 140:357058; MARPAT 140:357058			

GI



AB Novel 4,4'-bis(hydroxyphenyl)bicyclohexenes (I; R = C1-4 alkyl; n = an integer of 0-3) are produced by thermally decomposing 4,4,4',4'-tetrakis(hydroxyphenyl)bicyclohexanes preferably in the presence of an alkaline catalyst. The 4,4'-dihydroxyphenyl-bicyclohexenes are useful as synthetic resin materials for liquid crystal polyester, polycarbonate, polyurethane and the like, or materials for photoresists of display devices, semiconductors and the like. Thus, phenol was condensed with 4,4'-bicyclohexanone in the presence of dry HCl, dodecyl mercaptan, and methanol at 40° for 20 h to give 89.6% 4,4,4',4'-tetrakis(4-hydroxyphenyl)-1,1'-bicyclohexane which was heated in tetraethylene glycol in the presence of NaOH under reduced pressure (3.0 kpa) with removal of water at 203° for 3 h followed by neutralization with acetic acid to pH 6.0 to give 73.4% 4,4,4',4'-tetrakis(4-hydroxyphenyl)-1,1'-bicyclohex-3-ene.

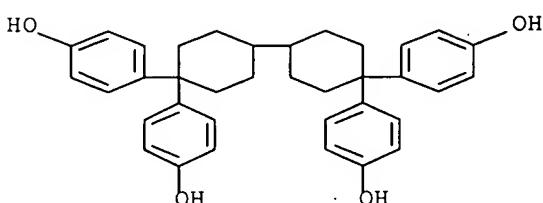
IT 256345-92-3P, 4,4,4',4'-Tetrakis(4-hydroxyphenyl)-1,1'-bicyclohexane 256345-93-4P, 4,4,4',4'-Tetrakis(3-methyl-4-hydroxyphenyl)-1,1'-bicyclohexane 256345-96-7P, 4,4,4',4'-Tetrakis(3,5-dimethyl-4-hydroxyphenyl)-1,1'-bicyclohexane 682759-50-8P, 4,4,4',4'-Tetrakis(3-isopropyl-4-hydroxyphenyl)-1,1'-bicyclohexane

RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of 4,4'-bis(hydroxyphenyl)bicyclohexene by thermal

decomposition of
 4,4,4',4'-tetrakis(hydroxyphenyl)bicyclohexane in presence of alkaline catalyst

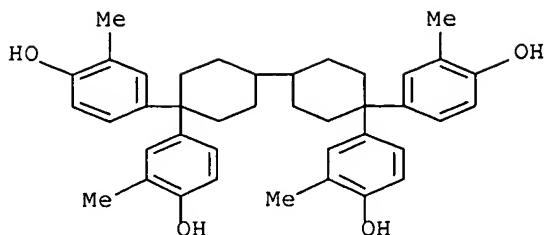
RN 256345-92-3 HCAPLUS

KN 250545 92-74-7 ACI-005
CN Phenol, 4,4',4'',4'''-[1,1'-bicyclohexyl]-4,4'-diylidenetetrakis- (9CI)
(CA INDEX NAME)



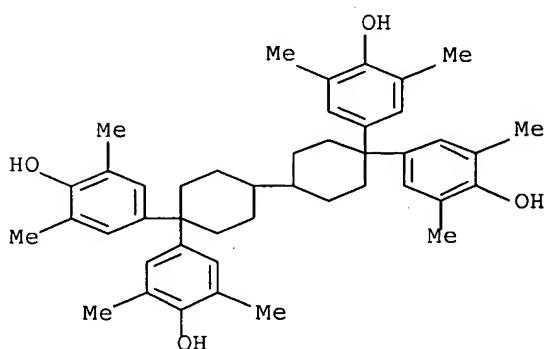
RN 256345-93-4 HCAPLUS

CN Phenol, 4,4',4'',4'''-[1,1'-bicyclohexyl]-4,4'-diylidene)trakis[2-methyl-(9CI) (CA INDEX NAME)



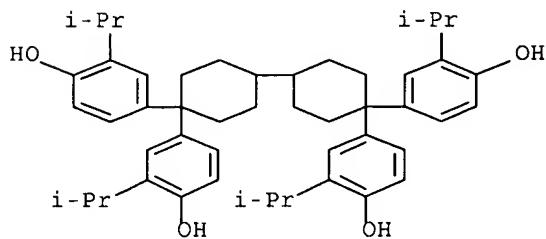
RN 256345-96-7 HCAPLUS

CN Phenol, 4,4',4'',4'''-[1,1'-bicyclohexyl]-4,4'-diylidenebis[2,6-dimethyl- (9CI) (CA INDEX NAME)



RN 682759-50-8 HCAPLUS

CN Phenol, 4,4',4'',4'''-[1,1'-bicyclohexyl]-4,4'-diylidenebis[2-(1-methylethyl)- (9CI) (CA INDEX NAME)



REFERENCE COUNT:

3

THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2000:77105 HCAPLUS Full-text

DOCUMENT NUMBER: 132:123036

TITLE: Tetrakis(hydroxyphenyl)dicyclohexane compounds

INVENTOR(S): Kawasaki, Shinsaku; Kawahara, Mikio; Egawa, Takeshi

PATENT ASSIGNEE(S): Honshu Chemical Industry Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000034248	A	20000202	JP 1998-200736	19980715 <--
JP 3830666	B2	20061004		

PRIORITY APPLN. INFO.: JP 1998-200736 19980715 <--

OTHER SOURCE(S): MARPAT 132:123036

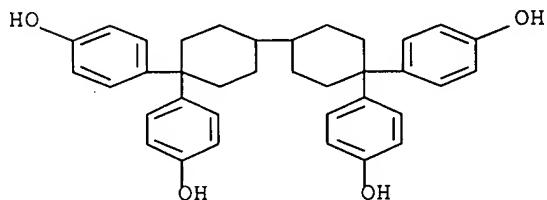
AB The title compds. useful for curing or modifying epoxy resins (no data), are R₂ZR₂ (Z = dicyclohexane-4,4'-diyl; R = hydroxyphenyl group which is optionally substituted with C₁-4 alkyl, C₅-6 cycloalkyl and Ph group). Thus, flushing dry HCl gas into a mixture of phenol 55.88, octyl mercaptan 1.94 and water 2.25 while stirring, adding a mixture of 4,4'-bicyclohexanone 19.4 and phenol 19.4 g to the mixture over 50 min and working up gave 4,4,4',4'-tetra(4-hydroxyphenyl)bicyclohexyl.

IT 256345-92-3P 256345-93-4P 256345-96-7P

RL: IMF (Industrial manufature); PREP (Preparation)
 (manufacture of tetrakis(hydroxyphenyl)dicyclohexane compds.)

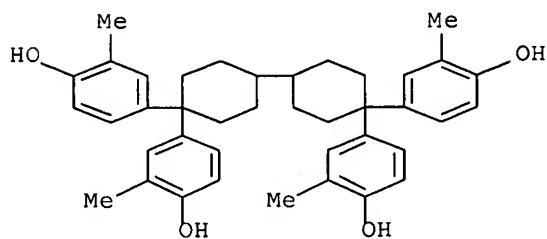
RN 256345-92-3 HCPLUS

CN Phenol, 4,4',4'',4'''-[1,1'-bicyclohexyl]-4,4'-diylidenetetrakis- (9CI)
 (CA INDEX NAME)



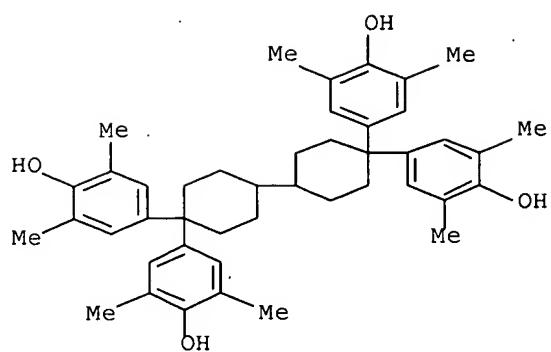
RN 256345-93-4 HCPLUS

CN Phenol, 4,4',4'',4'''-[1,1'-bicyclohexyl]-4,4'-diylidenetetrakis[2-methyl- (9CI) (CA INDEX NAME)]



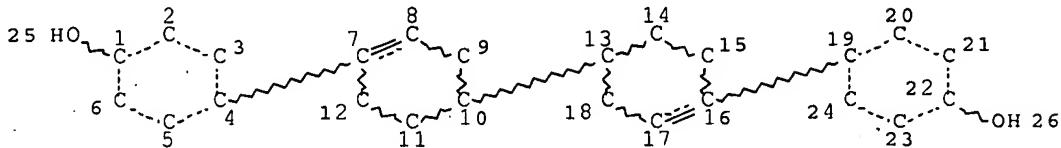
RN 256345-96-7 HCPLUS

CN Phenol, 4,4',4'',4'''-[1,1'-bicyclohexyl]-4,4'-diylidenetetrakis[2,6-dimethyl- (9CI) (CA INDEX NAME)]



SEARCH FOR "GENERAL FORMULA 1" IN REGISTRY AND CAPLUS (printed last 20 of 161 results; all 161 results have been saved)

=> d que stat 14
L1 STR



NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 26

STEREO ATTRIBUTES: NONE

L2 (161)SEA FILE=REGISTRY SSS FUL L1
L3 (162)SEA FILE=HCAPLUS ABB=ON L2
L4 161 SEA FILE=HCAPLUS ABB=ON L3 AND (PRD<20050929 OR PD<20050929)

=> d ibib abs hitstr 14 142-161

L4 ANSWER 142 OF 161 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1991:633204 HCAPLUS Full-text
DOCUMENT NUMBER: 115:233204
TITLE: Aliphatic polyesters
INVENTOR(S): Yamagata, Kazuo; Tsuchiyama, Kazuo; Yamaguchi, Makoto; Osuga, Makoto; Niki, Akihiro; Saito, Toranosuke; Kadomachi, Hironori; Kishimoto, Daishiro
PATENT ASSIGNEE(S): Sekisui Chemical Co. Ltd., Japan; Sanko Kaihatsu Kagaku Kenkyusho
SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03097723	A	19910423	JP 1989-235375	19890911 <--
JP 2556907	B2	19961127		

PRIORITY APPLN. INFO.: JP 1989-235375 19890911 <--
AB Title polyesters useful as thermoplastic elastomers with good heat resistance and mech. strength are composed of aliphatic dicarboxylic acids HO₂C(CH₂)_nCO₂H (I; n = 0-10), aliphatic diols, either dihydroxy compds. 1,4- HO(R₁O)_q(C₆H₄)_p(OR₂)_p(OR₂)_rOH (R_{1,2} = alkylanes, p = 3, 4; q, r ≥ 0) or monohydroxy compds. Ph-1,4-(C₆H₄)_l(OR₃)_mOH (R₃ = alkylene; l = 2, 3; m ≥ 0), and 0.25-2.5 equivalent (vs. 100 mol I) ≥ 1 branching agents selected from 3-6 OH-containing polyols, 3-4 carboxyl-containing polycarboxylic acids, and oxycarboxylic acids containing 2-6 OH and carboxyl groups. Thus, di-Me adipate 87.1, HOCH₂CH₂OH 74.4, 4,4''-dihydroxy-p- quarterphenyl 17.8, Me

trimellitate (II) 0.441, Ca(OAc)₂ 0.172, and GeO₂ 0.036 g were heated to give a polyester, which was then injection molded to give test pieces showing modulus 150 and 111 kg/cm², tensile strength 100 and 45 kg/cm², and elongation 470 and 523% (room temperature and 100°, resp.), vs. 152, 60, 105, 36, 480, and 300, resp., for the polyester similarly prepared without II.

IT 137316-89-3P

RL: PREP (Preparation)

(preparation of, with good mech. strength and heat resistance)

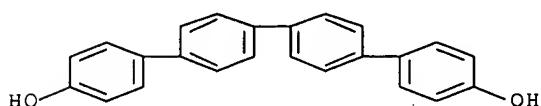
RN 137316-89-3 HCPLUS

CN Hexanedioic acid, dimethyl ester, polymer with 1,2-ethanediol, methyl 1,2,4-benzenetricarboxylate and [1,1':4',1'':4'',1'''-quaterphenyl]-4,4'''-diol (9CI) (CA INDEX NAME)

CM 1

CRN 10508-41-5

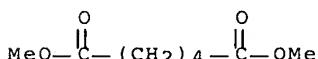
CMF C24 H18 O2



CM 2

CRN 627-93-0

CMF C8 H14 O4



CM 3

CRN 107-21-1

CMF C2 H6 O2



CM 4

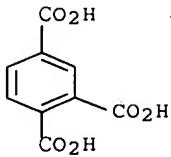
CRN 51281-39-1

CMF C9 H6 O6 . x C H4 O

CM 5

CRN 528-44-9

CMF C9 H6 O6



CM 6

CRN 67-56-1
CMF C H4 OH₃C—OH

L4 ANSWER 143 OF 161 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1991:609996 HCAPLUS Full-text
 DOCUMENT NUMBER: 115:209996
 TITLE: Heat- and chemical-resistant elastomer compositions containing polyesters
 INVENTOR(S): Yamagata, Kazuo; Tsuchama, Kazuo; Yamaguchi, Makoto; Oosuga, Makoto; Niki, Akihiro; Saito, Toranosuke; Kadomachi, Hironori; Kishimoto, Daishiro
 PATENT ASSIGNEE(S): Sekisui Chemical Co. Ltd., Japan; Sanko Kaihatsu Kagaku Kenkyusho
 SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03115337	A	19910516	JP 1989-252825	19890928 <--
JP 07051648	B	19950605		

PRIORITY APPLN. INFO.: JP 1989-252825 19890928 <--
 AB Title compns., useful for wire coatings, belts, automobile parts, tubes, etc., contain 5-85% vulcanizing rubbers and 15-95% polyesters prepared from HO₂C(CH₂)_nCO₂H (n = 0-10), aliphatic diols, and ≥1 compound selected from HO(R₁O)_q(p-C₆H₄)_p(OR₂)_rOH (R₁-2 = alkylene; q, r ≥ 0; p = 3-4) and Ph(p-C₆H₄)_l(OR₃)_mOH (R₃ = alkylene; l = 2-3; m ≥ 0). A polyester (I) prepared from di-Me adipate 268.2, HOCH₂CH₂OH 313.6, and 4,4''-dihydroxy-p-phenyl 60.9 g was blended with JSR SBR 1500 (SBR rubber) in 1:1 ratio at 200° and press vulcanized with S and 1,3-diphenylguanidine at 145° for 35 min to give a molding showing elongation 720%, volume change after 70 h in oil +26%, and no change in appearance during 5 days in benzene, vs. 570, +48, and swelling, resp., without I.

IT 136314-51-7

RL: USES (Uses)

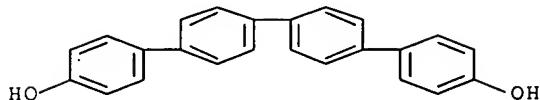
(rubbers containing, vulcanized, heat- and chemical-resistant)

RN 136314-51-7 HCAPLUS

CN Hexanedioic acid, dimethyl ester, polymer with 1,2-ethanediol and [1,1':4',1'':4'',1''':4''':1''''-quaterphenyl]-4,4''':diol (9CI) (CA INDEX NAME)

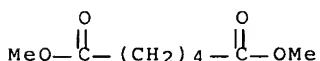
CM 1

CRN 10508-41-5
CMF C24 H18 O2



CM 2

CRN 627-93-0
CMF C8 H14 O4



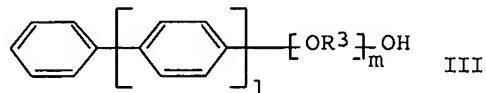
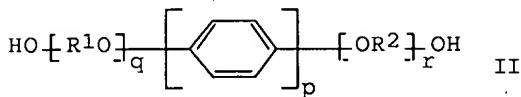
CM 3

CRN 107-21-1
CMF C2 H6 O2



L4 ANSWER 144 OF 161 HCPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1991:585145 HCPLUS Full-text
 DOCUMENT NUMBER: 115:185145
 TITLE: Manufacture of polyester elastomers
 INVENTOR(S): Tsuchama, Kazuo; Yamaguchi, Makoto; Oosuga, Makoto;
 Yamagata, Kazuo; Niki, Akihiro; Saito, Toranosuke;
 Kadomachi, Hironori; Kishimoto, Taishiro
 PATENT ASSIGNEE(S): Sekisui Chemical Co. Ltd., Japan; Sanko Kaihatsu
 Kagaku Kenkyusho
 SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03103433	A	19910430	JP 1989-239688	19890914 <--

PRIORITY APPLN. INFO.:
GI

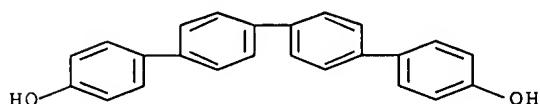
AB Title elastomers, heat-resistant with good moldability, are manufactured from a monomer mixture of HO₂C(CH₂)_nCO₂H (I; n = 0-10), aliphatic diols, and II (R₁, R₂ = alkylene; p = 3, 4; q, r ≥ 0) and/or III (R₃ = alkylene; l = 2, 3; m ≥ 0) containing 0.001-5% hindered phenol antioxidants and 0.001-5% S-based stabilizers. Thus, a mixture of di-Me adipate 87.1, ethylene glycol 74.4, and 4,4'''-dihydroxy-p-quaterphenyl 16.7 g was transesterified and polycondensed in the presence of Sb₂O₃, Ca(OAc)₂, 0.05% 3,9-bis[2-[3-(3-tert-butyl-4-hydroxy-5-methylphenyl)propionyloxy]-1,1-dimethylethyl]-2,4,8,10-tetraoxaspiro[5.5]undecane (IV) and 0.05% dilauryl 3,3'-thiodipropionate (V) to give a pale yellow polymer with intrinsic viscosity 1.55 in o-chlorophenol at 30° while the polymer decomposed without IV and V.

IT 136314-51-7P
 RL: IMF (Industrial manufacture); PREP (Preparation)
 (elastomer, preparation of, containing hindered phenols and sulfur compds., heat-resistant)

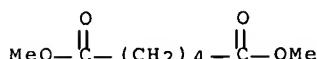
RN 136314-51-7 HCPLUS

CN Hexanedioic acid, dimethyl ester, polymer with 1,2-ethanediol and [1,1':4',1'':4'',1'''-quaterphenyl]-4,4'''-diol (9CI) (CA INDEX NAME)

CM 1

CRN 10508-41-5
 CMF C24 H18 O2

CM 2

CRN 627-93-0
 CMF C8 H14 O4

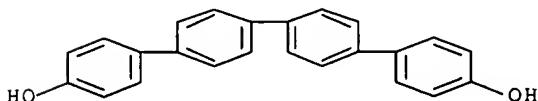
CM 3

CRN 107-21-1
CMF C2 H6 O2HO—CH₂—CH₂—OH

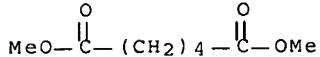
L4 ANSWER 145 OF 161 HCPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1991:585143 HCPLUS Full-text
 DOCUMENT NUMBER: 115:185143
 TITLE: Thin sheet moldings of polyester elastomers
 INVENTOR(S): Osuga, Makoto; Tsuchiyama, Kazuo; Yamaguchi, Makoto;
 Yamagata, Kazuo; Niki, Akihiro; Saito, Toranosuke;
 Kadomachi, Hironori; Kishimoto, Daishiro
 PATENT ASSIGNEE(S): Sekisui Chemical Co. Ltd., Japan; Sanko Kaihatsu
 Kagaku Kenkyusho
 SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03115325	A	19910516	JP 1989-252823	19890928 <--
PRIORITY APPLN. INFO.:			JP 1989-252823	19890928 <--
AB	Polyester elastomers are prepared from C2-12 linear aliphatic dicarboxylic acids, aliphatic diols, and ≥1 compound selected from dihydroxy polyphenyls, such as 4,4'''-dihydroxy-p-quaterphenyl (I), and monohydroxy polyphenyls. Thus, a 25-μm film was prepared from di-Me adipate-ethylene glycol-I copolymer and did not break at 0° or at -30° in the Izod impact strength test.			
IT	136314-51-7			
RL	USES (Uses)			
	(rubber, for films)			
RN	136314-51-7 HCPLUS			
CN	Hexanedioic acid, dimethyl ester, polymer with 1,2-ethanediol and [1,1':4',1'':4'',1'''-quaterphenyl]-4,4'''-diol (9CI) (CA INDEX NAME)			

CM 1

CRN 10508-41-5
CMF C24 H18 O2

CM 2

CRN 627-93-0
CMF C8 H14 O4

CM 3

CRN 107-21-1
CMF C2 H6 O2

L4 ANSWER 146 OF 161 HCPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1991:584655 HCPLUS Full-text
 DOCUMENT NUMBER: 115:184655
 TITLE: Fiber-reinforced polyester composite
 INVENTOR(S): Tsuchiyama, Kazuo; Yamaguchi, Makoto; Osuga, Makoto;
 Yamagata, Kazuo; Niki, Akihiro; Saito, Toranosuke;
 Kadomachi, Hironori; Kishimoto, Daishiro
 PATENT ASSIGNEE(S): Sekisui Chemical Co. Ltd., Japan; Sanko Kaihatsu
 Kagaku Kenkyusho K. K.
 SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03118151	A	19910520	JP 1989-256574	19890929 <--
JP 08005175	B	19960124		

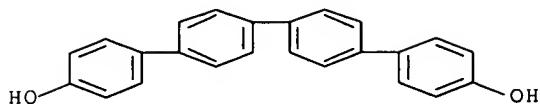
PRIORITY APPLN. INFO.: JP 1989-256574 19890929 <--
 AB The title composite, with good softness, comprises reinforcing fibers and polyesters from aliphatic dicarboxylic acids, aliphatic diols, and dihydroxy Ph compds. and/or monohydroxy Ph compds. A composite, prepared by sandwiching glass cloth between 2-ply di-Me adipate-ethylene glycol-HO-(p-C₆H₄)₄OH (0.5:1.2:0.05 mol) copolymer sheets at 250°, had tensile strength 35 kg/mm² with good softness.

IT 136314-51-7
 RL: USES (Uses)
 (fiber-reinforced, soft)

RN 136314-51-7 HCPLUS
 CN Hexanedioic acid, dimethyl ester, polymer with 1,2-ethanediol and [1,1':4',1'':4'',1'''-quaterphenyl]-4,4'''-diol (9CI) (CA INDEX NAME)

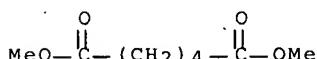
CM 1

CRN 10508-41-5
 CMF C24 H18 O2



CM 2

CRN 627-93-0
 CMF C8 H14 O4



CM 3

CRN 107-21-1
 CMF C2 H6 O2



L4 ANSWER 147 OF 161 HCPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1991:584206 HCPLUS Full-text
 DOCUMENT NUMBER: 115:184206
 TITLE: Preparation of aliphatic polyesters
 INVENTOR(S): Yamaguchi, Makoto; Tsuchama, Kazuo; Oosuga, Makoto;
 Yamagata, Kazuo; Niki, Akihiro; Saito, Toranosuke;
 Kadomachi, Hironori; Kishimoto, Daishiro
 PATENT ASSIGNEE(S): Sekisui Chemical Co. Ltd., Japan; Sanko Kaihatsu
 Kagaku Kenkyusho
 SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03097728	A	19910423	JP 1989-235373	19890911 <--
JP 2551663	B2	19961106		

PRIORITY APPLN. INFO.: JP 1989-235373 19890911 <--
 AB The title polyesters useful as thermoplastic elastomers with good heat
 resistance and mech. strength are prepared by treating aliphatic dicarboxylic
 acids of general formula $\text{HO}_2\text{C}(\text{CH}_2)_n\text{CO}_2\text{H}$ ($n = 0-10$ integers), aliphatic diols,

and either dihydroxy compds. of general formula 1,4- HO(R1O)_q(C₆H₄)_p(OR₂)rOH (R_{1,2} = alkylene, p = 3, 4; q, r = 0 or \geq 1) or monohydroxy compds. of general formula C₆H₅-1,4-(C₆H₄)_l(OR₃)_mOH (R₃ = alkylene; l = 2, 3; m = 0 or \geq 1) in the presence of catalysts comprising Ge compds. and metal acetates. Thus, 4-hydroxy-4'-bromobiphenyl 60.0, 5%-Pd/C 13, 10% aqueous NaOH 300, and MeOH 300 g were treated to give 4,4'''-dihydroxy-p-quaterphenyl (I). Sep. di-Me adipate 1.0, HOCH₂CH₂OH 2.4, Ca(OAc)₂ (II) 0.3 + 10-3, and GeO₂ 6.5 + 10-4 mol were treated to give bis(2-hydroxyethyl)adipate, into which 0.075 mol of I was added and the resulting mixture was heated to obtain a colorless polyester with intrinsic viscosity of 1.41. A polyester similarly prepared without II was yellow-colored with intrinsic viscosity of 0.50.

IT 126842-95-3P, Bis(2-hydroxyethyl)adipate-4,4'''-dihydroxy-p-quaterphenyl copolymer

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (preparation of, in presence of germanium compds. and metal acetates, with good mech. strength and heat resistance)

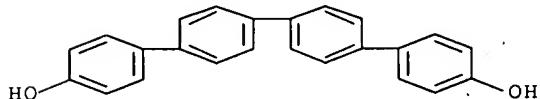
RN 126842-95-3 HCPLUS

CN Hexanedioic acid, bis(2-hydroxyethyl) ester, polymer with [1,1':4',1'':4'',1'''-quaterphenyl]-4,4'''-diol (9CI) (CA INDEX NAME)

CM 1

CRN 10508-41-5

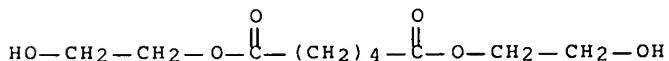
CMF C24 H18 O2



CM 2

CRN 1700-12-5

CMF C10 H18 O6

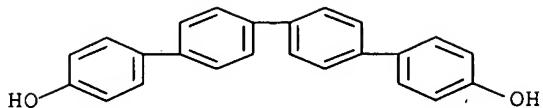


IT 132971-30-3

RL: RCT (Reactant); RACT (Reactant or reagent) (reaction of, for dihydroxyquaterphenyl)

RN 132971-30-3 HCPLUS

CN [1,1':4',1'':4'',1'''-Quaterphenyl]-4,4'''-diol, disodium salt (9CI) (CA INDEX NAME)



●2 Na

L4 ANSWER 148 OF 161 HCPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1991:561021 HCPLUS Full-text
 DOCUMENT NUMBER: 115:161021
 TITLE: Aliphatic polyester manufacture in the presence of stabilizers
 INVENTOR(S): Tsuchiyama, Kazuo; Yamaguchi, Makoto; Oosuga, Makoto; Oosuga, Makoto; Niki, Akihiro; Saito, Toranosuke; Kadomachi, Hironori; Kishimoto, Daishiro
 PATENT ASSIGNEE(S): Sekisui Chemical Co. Ltd., Japan; Sanko Kaihatsu Kagaku Kenkyusho K. K.
 SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03097726	A	19910423	JP 1989-235376	19890911 <--
JP 2551665	B2	19961106		

PRIORITY APPLN. INFO.: JP 1989-235376 19890911 <--
 AB Thermoplastic elastomeric polyesters are prepared from aliphatic dicarboxylic acids, aliphatic diols, and di- and/or monohydroxypolypheyls in the presence of 0.001-5% hindered phenol antioxidants and 0.001-5% P compound stabilizers. Thus, heating di-Me adipate 87.1, ethylene glycol 74.4, and 4,4'''-p-quaterphenyldiol 16.7 g with Sb2O3 20, Ca(OAc)2 80, 1,3,5-trimethyl-2,4,6-tris(3,5-di-tert-butyl-4-hydroxybenzyl)benzene 90, and tris(2,4-di-tert-butylphenyl) phosphite 19 mg gave a light-yellow polymer; vs. black without stabilizers.

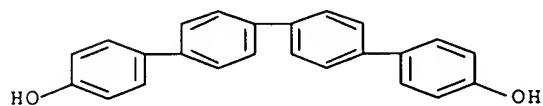
IT 10508-41-5DP, esters with polyesters 136314-51-7P

RL: PREP (Preparation)

(rubber, antioxidants and heat stabilizers for manufacture of)

RN 10508-41-5 HCPLUS

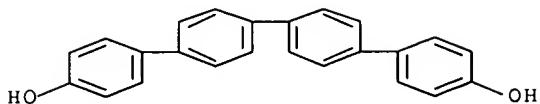
CN [1,1':4',1'':4'',1'''-Quaterphenyl]-4,4'''-diol (9CI) (CA INDEX NAME)



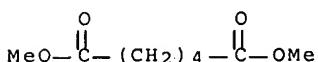
RN 136314-51-7 HCPLUS

CN Hexanedioic acid, dimethyl ester, polymer with 1,2-ethanediol and [1,1':4',1'':4'',1'''-quaterphenyl]-4,4'''-diol (9CI) (CA INDEX NAME)

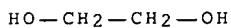
CM 1

CRN 10508-41-5
CMF C24 H18 O2

CM 2

CRN 627-93-0
CMF C8 H14 O4

CM 3

CRN 107-21-1
CMF C2 H6 O2

L4 ANSWER 149 OF 161 HCPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1991:538022 HCPLUS Full-text
 DOCUMENT NUMBER: 115:138022
 TITLE: Thermoplastic elastomeric polyesters
 INVENTOR(S): Oosuga, Makoto; Tsuchama, Kazuo; Yamaguchi, Makoto;
 Yamagata, Kazuo; Niki, Akihiro; Saito, Toranosuke;
 Kadomachi, Hironori; Kishimoto, Daishiro
 PATENT ASSIGNEE(S): Sekisui Chemical Co. Ltd., Japan; Sanko Kaihatsu
 Kagaku Kenkyusho K. K.
 SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03097725	A	19910423	JP 1989-235374	19890911 <--
JP 2551664	B2	19961106		
PRIORITY APPLN. INFO.:			JP 1989-235374	19890911 <--

AB The title polyesters are prepared from C2-12 alkanedioic acids, polyphenyldiols [e.g. as 4,4'''-p-quaterphenyldiol (I)], and aliphatic diols. Di-Me adipate-ethylene glycol-I copolymer was prepared

IT 136314-51-7P

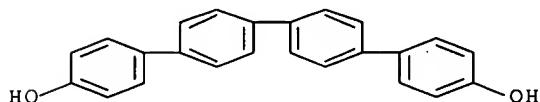
RL: PREP (Preparation)
(rubber, thermoplastic, manufacture of)

RN 136314-51-7 HCPLUS

CN Hexanedioic acid, dimethyl ester, polymer with 1,2-ethanediol and [1,1':4',1'':4'',1'''-quaterphenyl]-4,4'''-diol (9CI) (CA INDEX NAME)

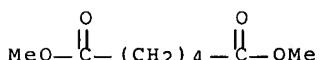
CM 1

CRN 10508-41-5
CMF C24 H18 O2



CM 2

CRN 627-93-0
CMF C8 H14 O4



CM 3

CRN 107-21-1
CMF C2 H6 O2



L4 ANSWER 150 OF 161 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1991:430091 HCPLUS Full-text

DOCUMENT NUMBER: 115:30091

TITLE: Ring-opening polymerized polylactones with good solubility and fusibility

INVENTOR(S): Niki, Akihiro; Tsuchiyama, Kazuo; Osuga, Makoto; Yamaguchi, Makoto; Saito, Toranosuke; Kadomachi, Hironori; Kishimoto, Daishiro

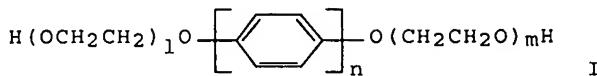
PATENT ASSIGNEE(S): Sekisui Chemical Co. Ltd., Japan; Sanko Kaihatsu Kagaku Kenkyusho

SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 02311523	A	19901227	JP 1989-133369	19890526 <--
JP 2572129	B2	19970116		
PRIORITY APPLN. INFO.:			JP 1989-133369	19890526 <--
GI				



AB The title polylactones, useful for manufacturing heat-resistant urethane or polyester rubbers, are prepared by ring-opening polymerization with dihydroxy compds. $\text{H}(\text{OC}_2\text{H}_4)_1\text{p-O-(C}_6\text{H}_4\text{)}_n\text{O-(C}_2\text{H}_4\text{O})_m\text{H}$ ($l, m \geq 0, n = 3, 4$) as polymerization initiators. Thus, a Grinard reagent from 4-methoxy-4'-bromobiphenyl was coupled with 4-bromoanisole and treated with PBr_3 to give 4,4"-dihydroxy-p-terphenyl having DMF solubility (A, 25°) 7 g/100 g, 300 parts of which was treated with 700 parts ϵ -caprolactone in the presence of $(\text{BuO})_4\text{Ti}$ at 200° for 4 h to give a polylactone having intrinsic viscosity 0.11, m.p. $38-41^\circ$, and A 59 g/100 g.

IT 134157-49-6P

RL: PREP (Preparation)

(preparation of, by ring-opening polymerization, initiators for, dihydroxy polyphenylene compds. as, for solubility and fusibility improvement)

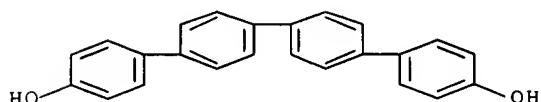
RN 134157-49-6 HCPLUS

CN 2-Oxepanone, polymer with [1,1':4',1'':4'',1'''-quaterphenyl]-4,4'''-diol (9CI) (CA INDEX NAME)

CM 1

CRN 10508-41-5

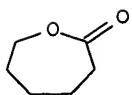
CMF C24 H18 O2



CM 2

CRN 502-44-3

CMF C6 H10 O2



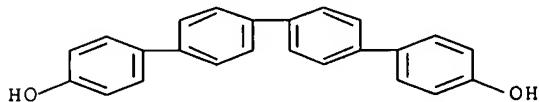
IT 10508-41-5

RL: USES (Uses)

(ring-opening polymerization initiators, for preparation of polylactones,
for solubility
and fusibility improvement)

RN 10508-41-5 HCAPLUS

CN [1,1':4',1'':4'',1''':-Quaterphenyl]-4,4''':-diol (9CI) (CA INDEX NAME)



L4 ANSWER 151 OF 161 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1991:248031 HCAPLUS Full-text

DOCUMENT NUMBER: 114:248031

TITLE: 4-Hydroxy-p-quaterphenyl derivatives for preparation
of aliphatic polyestersINVENTOR(S): Tsuchiyama, Kazuo; Niki, Akihiro; Yamaguchi, Makoto;
Osuga, Makoto; Saito, Toranosuke; Kadomachi, Hironori;
Kishimoto, DaishiroPATENT ASSIGNEE(S): Sekisui Chemical Co. Ltd., Japan; Sanko Kaihatsu
Kagaku Kenkyusho

SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 02311524	A	19901227	JP 1989-133365	19890526 <--
JP 2556899	B2	19961127		

PRIORITY APPLN. INFO.: JP 1989-133365 19890526 <--

OTHER SOURCE(S): MARPAT 114:248031

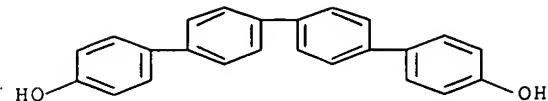
AB The title compds. Ph(R)3OR' [R = 1,4-phenylene; R1 = alkyl, COR2, (R3O)nH; R2 = alkyl; R3 = alkylene; n = 0,1] are useful for the preparation of heat-resistant polyesters. Thus, a polyester, prepared by the polycondensation of 1 mol bis(2-hydroxyethyl) adipate with 0.025 mol hydroquinone and 0.125 mol 4,4''':-dihydroxy-p-quarter Ph, had m.p. 305°.

IT 10508-41-5P

RL: PREP (Preparation)
(preparation of)

RN 10508-41-5 HCAPLUS

CN [1,1':4',1'':4'',1''':-Quaterphenyl]-4,4''':-diol (9CI) (CA INDEX NAME)



IT 126842-99-7P 133880-98-5P

RL: PREP (Preparation)

(preparation of, heat-resistant)

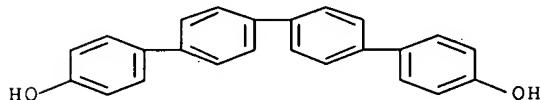
RN 126842-99-7 HCPLUS

CN Hexanedioic acid, bis(2-hydroxyethyl) ester, polymer with 1,4-benzenediol and [1,1':4',1'':4'',1'''-quaterphenyl]-4,4'''-diol (9CI) (CA INDEX NAME)

CM 1

CRN 10508-41-5

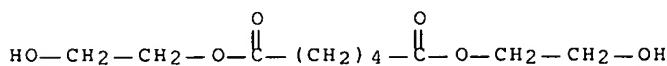
CMF C24 H18 O2



CM 2

CRN 1700-12-5

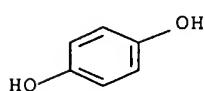
CMF C10 H18 O6



CM 3

CRN 123-31-9

CMF C6 H6 O2



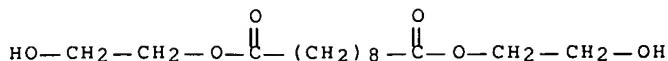
RN 133880-98-5 HCPLUS

CN Decanedioic acid, bis(2-hydroxyethyl) ester, polymer with 1,4-benzenediol and [1,1':4',1'':4'',1'''-quaterphenyl]-4,4'''-diol (9CI) (CA INDEX NAME)

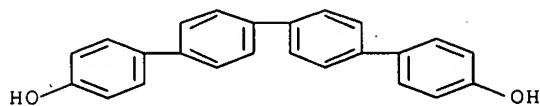
CM 1

CRN 17200-46-3

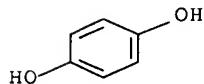
CMF C14 H26 O6



CM 2

CRN 10508-41-5
CMF C24 H18 O2

CM 3

CRN 123-31-9
CMF C6 H6 O2

L4 ANSWER 152 OF 161 HCPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1991:228510 HCPLUS Full-text
 DOCUMENT NUMBER: 114:228510
 TITLE: Preparation of 4,4'''-dihydroxyquater-phenyl and its derivatives
 INVENTOR(S): Saito, Toranosuke; Ikemoto, Kenichi; Sakaguchi, Katsuya; Hirakawa, Norio
 PATENT ASSIGNEE(S): Sanko Kaihatsu Kagaku Kenkyusho, Japan
 SOURCE: Eur. Pat. Appl., 7 pp.
 CODEN: EPXXDW
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 390945	A1	19901010	EP 1989-105955	19890405 <--
EP 390945	B1	19931118		
R: CH, DE, FR, GB, LI				
PRIORITY APPLN. INFO.:			EP 1989-105955	19890405 <--
OTHER SOURCE(S):	MARPAT 114:228510			

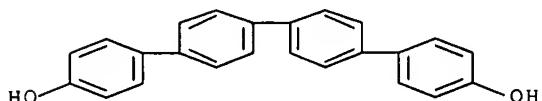
AB Dihydroxyquaterphenyl derivs. I (R = H, C1-4 alkyl, acyl) are prepared by Pd-catalyzed dehalogenation/dimerization of hydroxyhalobiphenyl derivs. II (X = halo) in inert, organic, polar solvents in the presence of hydroxides, carbonates, or bicarbonates of alkali or alkaline earth metals. Thus, a mixture of 4-hydroxy-4'-bromobiphenyl 60.0, MeOH 100, aqueous 10% NaOH 300, and 5% Pd/C 13 g was stirred 4 h at 120° and 4-5 atm to give, after workup in 2 crops, 73.2% I (R = H) of >98% purity.

IT 10508-41-5P 132971-30-3P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, by dehalogenation and dimerization of hydroxybromobiphenyl or acetoxybromobiphenyl)

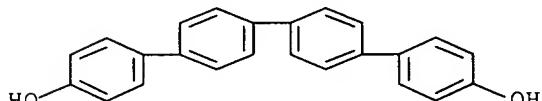
RN 10508-41-5 HCPLUS

CN [1,1':4',1'':4'',1''':Quaterphenyl]-4,4''':diol (9CI) (CA INDEX NAME)



RN 132971-30-3 HCPLUS

CN [1,1':4',1'':4'',1''':Quaterphenyl]-4,4''':diol, disodium salt (9CI) (CA INDEX NAME)



●2 Na

L4 ANSWER 153 OF 161 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1991:184979 HCPLUS Full-text

DOCUMENT NUMBER: 114:184979

TITLE: Preparation of 4,4''':Dihydroxyquaterphenyl derivatives

INVENTOR(S): Saito, Toranosuke; Ikemoto, Kenichi; Kadomachi, Hironori

PATENT ASSIGNEE(S): Sanko Kaihatsu Kagaku Kenkyusho K. K., Japan; Sekisui Chemical Co. Ltd.

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

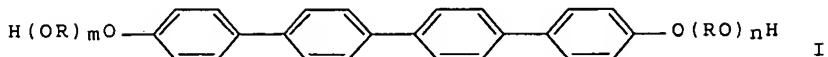
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	-----	-----	-----	-----
JP 02268129	A	19901101	JP 1989-87900	19890410 <--
JP 2636042	B2	19970730	JP 1989-87900	19890410 <--

PRIORITY APPLN. INFO.: JP 1989-87900

OTHER SOURCE(S) :

MARPAT 114:184979

GI

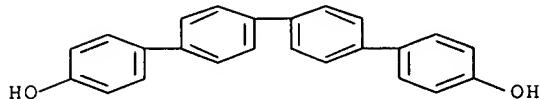


AB The title compds. (I; R = alkylene; m, n = 0, 1; m ≠ n = 0), useful as monomers, were prepared by treatment of I (m = n = 0) (II) with alkylene oxides, alkylene carbonates, or haloalkanols. K₂CO₃ was added to a stirring mixture of II, ethylene carbonate, and sulfolane at 130-140°, after 30 min K₂CO₃ was added again and the reaction mixture was further stirred at 160° for 3 h to give 98% I (R = CH₂CH₂, m = n = 1).

IT 10508-41-5
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (hydroxyalkylation of, with alkylene oxides or alkylene carbonates or haloalkanols, bis(hydroxyalkoxy)quaterphenyl from)

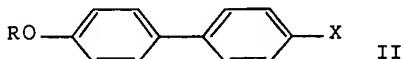
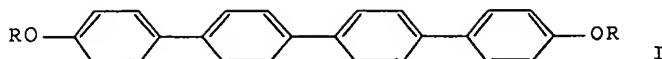
RN 10508-41-5 HCAPLUS

CN [1,1':4',1'':4'',1''':-Quaterphenyl]-4,4''':-diol (9CI) (CA INDEX NAME)



L4 ANSWER 154 OF 161 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1991:163758 HCAPLUS Full-text
 DOCUMENT NUMBER: 114:163758
 TITLE: Preparation of 4,4''':-dihydroxyquaterphenyl and its derivatives
 INVENTOR(S): Saito, Toranosuke; Ikemoto, Kenichi; Hirakawa, Norio;
 Sakaguchi, Katsuya
 PATENT ASSIGNEE(S): Sanko Kaihatsu Kagaku Kenkyusho, Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 02255634	A	19901016	JP 1989-75173	19890329 <--
PRIORITY APPLN. INFO.:			JP 1989-75173	19890329 <--
OTHER SOURCE(S):	MARPAT 114:163758			
GI				



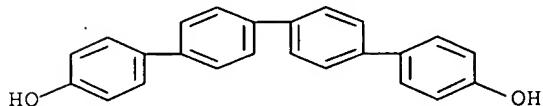
AB The title compds. I ($R = H$, alkyl, acyl), useful as materials for liquid crystals, heat-resistant polymers, and synthetic rubber modifiers, etc., are prepared by dehalogenation-dimerization of hydroxyhalobiphenyls II ($X = \text{halo}$) in inert organic polar solvents in the presence of hydroxides, carbonates, and/or bicarbonates of alkali metals or alkaline earth metals. Thus, a mixture of II ($R = H$, $X = \text{Br}$), MeOH, aqueous NaOH solution, and Pd/C was autoclaved at 120° under 4-5 atm for 4 h, then filtered. The obtained solid was stirred in DMF under heating for 1 h, filtered, and the filtrate was acidified to give 60.1% I ($R = H$).

IT 132971-30-3P, 4,4''''-Dihydroxyquaterphenyl disodium salt

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and acidification of)

RN 132971-30-3 HCPLUS

CN [1,1':4',1'':4'',1''''-Quaterphenyl]-4,4''''-diol, disodium salt (9CI) (CA INDEX NAME)



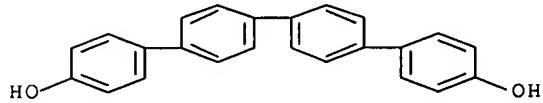
●2 Na

IT 10508-41-5DP, dialkyl diethers 10508-41-5P,
4,4''''-Dihydroxyquaterphenyl

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, by dimerization of halohydroxybiphenyl or its derivs.)

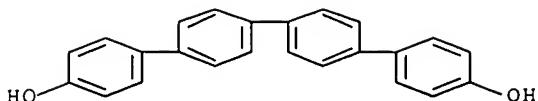
RN 10508-41-5 HCPLUS

CN [1,1':4',1'':4'',1''''-Quaterphenyl]-4,4''''-diol (9CI) (CA INDEX NAME)



RN 10508-41-5 HCPLUS

CN [1,1':4',1'':4'',1''''-Quaterphenyl]-4,4''''-diol (9CI) (CA INDEX NAME)



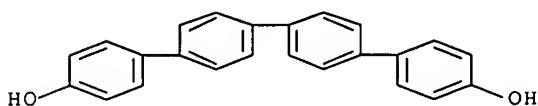
L4 ANSWER 155 OF 161 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1990:533151 HCAPLUS Full-text
 DOCUMENT NUMBER: 113:133151
 TITLE: Vinyl chloride polymers with good heat resistance
 INVENTOR(S): Fujii, Noriki; Shibasaki, Yukio; Kato, Masaharu
 PATENT ASSIGNEE(S): Sekisui Chemical Co. Ltd., Japan
 SOURCE: Jpn: Kokai Tokkyo Koho, 4 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 02049024	A	19900219	JP 1988-201381	19880811 <--
PRIORITY APPLN. INFO.:			JP 1988-201381,	19880811 <--

AB Title polymers are prepared by polycondensation of CO₂H-terminated (both ends) vinyl chloride polymers and OH-terminated (both ends) phenol compds. Thus, a mixture of partly saponified poly(vinyl alc.) 5, 4,4'-azobis(4-cyanopentanoic acid) 360, and vinyl chloride 1000 g in 12 kg H₂O was heated at 75° for 5 h to obtain a polymer (I) containing 2.2% CO₂H with average d.p. 65. Treating 1.5 kg Ph₃PO with 0.63 g oxalyl chloride in PhCl, and heating with I 9.4, bisphenol A 0.52, and Et₃N 0.94 g in the presence of 20 mL pyridine at 100° for 4 h gave a polymer (average d.p. 480) showing glass transition temperature 92.5° and liberated HCl 6800 ppm, vs. 83 and 8000, resp., for PVC with average d.p. 480.

IT 10508-41-5DP, copolymers with carboxy-terminated poly(vinyl chloride)
 RL: PREP (Preparation)
 (preparation of, with good heat resistance)

RN 10508-41-5 HCAPLUS
 CN [1,1':4',1'':4'',1''':Quaterphenyl]-4,4''':diol (9CI) (CA INDEX NAME)



L4 ANSWER 156 OF 161 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1990:425084 HCAPLUS Full-text
 DOCUMENT NUMBER: 113:25084
 TITLE: Manufacture of heat-resistant polycarbonates containing quaterphenyl units
 INVENTOR(S): Osuga, Makoto; Niki, Akihiro; Kamisaka, Toshio; Saito, Toranosuke; Kadomachi, Hironori
 PATENT ASSIGNEE(S): Sekisui Chemical Co. Ltd., Japan; Sanko Kaihatsu

SOURCE: Kagaku Kenyusho
 Jpn. Kokai Tokkyo Koho, 4 pp.
 CODEN: JKXXAF

DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 01299821	A	19891204	JP 1988-129178	19880526 <--
JP 08005950	B	19960124		

PRIORITY APPLN. INFO.: JP 1988-129178 19880526 <--

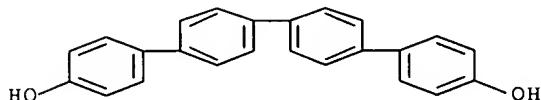
AB The title polymers are prepared by transesterifying polycarbonates with quaterphenyl derivs. $\text{AcO}(\text{CH}_2\text{CH}_2\text{O})_n(\text{p-C}_6\text{H}_4)_4(\text{OCH}_2\text{CH}_2)_n\text{OAc}$ (I; $n = 0-1$). The reaction of $\text{HO}(\text{p-C}_6\text{H}_4)_4\text{OH}$ with Ac_2O in sulfolane at 160° for 3 h gave I ($n = 0$) which (30 parts) was heated with 100 parts Panlite L 1225 at 350° in vacuo for 5 h to give a polymer having heat distortion temperature 229° , vs. 134° for Panlite L 1225.

IT 10508-41-5

RL: RCT (Reactant); RACT (Reactant or reagent)
 (esterification of, with acetic anhydride)

RN 10508-41-5 HCAPLUS

CN [1,1':4',1'':4'',1'''-Quaterphenyl]-4,4'''-diol (9CI) (CA INDEX NAME)

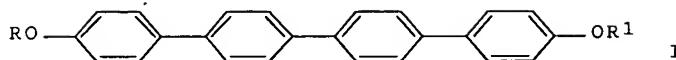


L4 ANSWER 157 OF 161 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1990:200380 HCAPLUS Full-text
 DOCUMENT NUMBER: 112:200380
 TITLE: P-Quaterphenyldiol-based polyester thermoplastic elastomers and articles made from them
 INVENTOR(S): Niki, Akihiro; Ohsuga, Makoto; Uesaka, Toshio; Saito, Toranosuke; Tsunomachi, Hiroki; Doyama, Kazuo; Yamaguchi, Makoto; Kishimoto, Daishiro
 PATENT ASSIGNEE(S): Sekisui Chemical Co. Ltd., Japan; Sanko Kaihatsu Kagaku Kenyusho
 SOURCE: Eur. Pat. Appl., 23 pp.
 CODEN: EPXXDW
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 344099	A2	19891129	EP 1989-730128	19890525 <--
EP 344099	A3	19910123		
EP 344099	B1	19950412		
R: DE, FR, GB, IT, NL, SE				
AU 8935170	A	19891130	AU 1989-35170	19890525 <--
AU 619840	B2	19920206		
JP 02276817	A	19901113	JP 1989-133367	19890526 <--

JP 06045676	B	19940615		
CA 1335225	C	19950411	CA 1989-600829	19890526 <--
KR 9706673	B1	19970429	KR 1989-7084	19890526 <--
US 5191057	A	19930302	US 1991-804540	19911211 <--
US 5235024	A	19930810	US 1992-980841	19921124 <--
PRIORITY APPLN. INFO.:				
		JP 1988-129181	A 19880526 <--	
		JP 1988-129182	A 19880526 <--	
		JP 1988-216874	A 19880831 <--	
		JP 1988-216876	A 19880831 <--	
		JP 1989-15745	A 19890124 <--	
		JP 1989-15748	A 19890124 <--	
		US 1989-356726	B2 19890525 <--	
		US 1989-438142	B1 19891120 <--	
		US 1991-804540	A3 19911211 <--	

GI



AB Heat-resistant polyester thermoplastic elastomers with excellent mech. properties are prepared from a dicarboxylic acid and diols including p-quaterphenyl derivative I (R, R1 = H, CH₂CH₂OH). Other polyesters containing I are highly crystalline with a liquid-crystal molten state, and are useful as engineering plastics. Thus, 0.10 mol I (R = R1 = H) (II) and 1.00 mol bis(2-hydroxyethyl) adipate (III) were heated at 280° for 2 h and at 280°/1 mm for 1 h to give a polyester showing m.p. 336°, tensile strength 232 kg/cm², elongation 1230%, tensile modulus 258 kg/cm², and Shore D hardness 37. A similar polyester elastomer prepared from III without II had m.p. 48°.

IT 126843-08-1P, Bisphenol A-4,4'''-dihydroxy-p-quaterphenyl-terephthaloyl dichloride copolymer 126843-09-2P, Bisphenol A-4,4'''-dihydroxy-p-quaterphenyl-isophthaloyl dichloride-terephthaloyl dichloride copolymer 126843-10-5P, 4,4'''-Dihydroxy-p-quaterphenyl-ethylene glycol-terephthalic acid copolymer 126843-17-2P

RL: PREP (Preparation)

(manufacture of heat-resistant, with anisotropic melt)

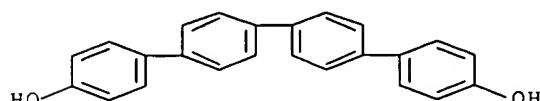
RN 126843-08-1 HCPLUS

CN 1,4-Benzenedicarbonyl dichloride, polymer with 4,4'-(1-methylethylidene)bis[phenol] and [1,1':4',1'':4'',1'''-quaterphenyl]-4,4'''-diol (9CI) (CA INDEX NAME)

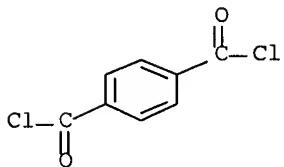
CM 1

CRN 10508-41-5

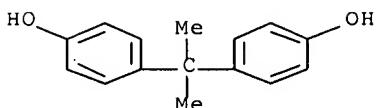
CMF C24 H18 O2



CM 2

CRN 100-20-9
CMF C8 H4 Cl2 O2

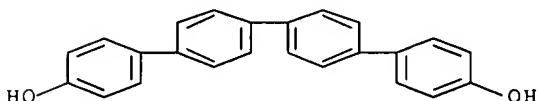
CM 3

CRN 80-05-7
CMF C15 H16 O2

RN 126843-09-2 HCAPLUS

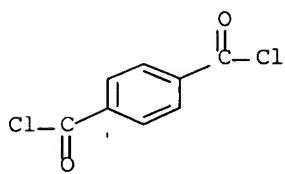
CN 1,3-Benzene dicarbonyl dichloride, polymer with 1,4-benzeneddicarbonyl dichloride, 4,4'-(1-methylethylidene)bis[phenol] and [1,1':4',1'':4'',1'''-quaterphenyl]-4,4'''-diol (9CI) (CA INDEX NAME)

CM 1

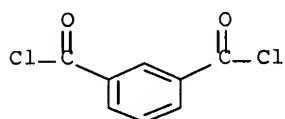
CRN 10508-41-5
CMF C24 H18 O2

CM 2

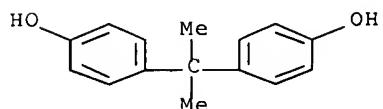
CRN 100-20-9
CMF C8 H4 Cl2 O2



CM 3

CRN 99-63-8
CMF C8 H4 Cl2 O2

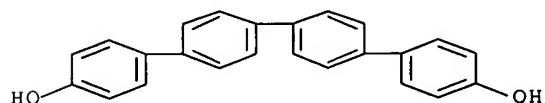
CM 4

CRN 80-05-7
CMF C15 H16 O2

RN 126843-10-5 HCAPLUS

CN 1,4-Benzenedicarboxylic acid, polymer with 1,2-ethanediol and
[1,1':4',1'':4'',1''':4''',1''''-quaterphenyl]-4,4''''-diol (9CI) (CA INDEX NAME)

CM 1

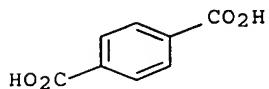
CRN 10508-41-5
CMF C24 H18 O2

CM 2

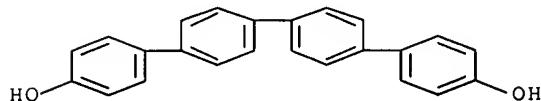
CRN 107-21-1
CMF C2 H6 O2

HO—CH₂—CH₂—OH

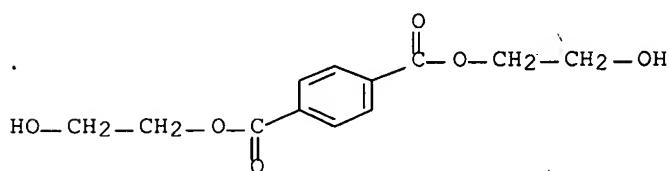
CM 3

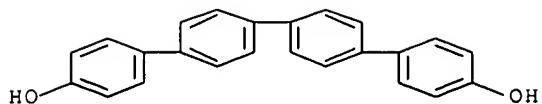
CRN 100-21-0
CMF C₈ H₆ O₄RN 126843-17-2 HCPLUS
CN 1,4-Benzenedicarboxylic acid, bis(2-hydroxyethyl) ester, polymer with [1,1':4',1'':4'',1''':4''':1''''-quaterphenyl]-4,4''''-diol (9CI) (CA INDEX NAME)

CM 1

CRN 10508-41-5
CMF C₂₄ H₁₈ O₂

CM 2

CRN 959-26-2
CMF C₁₂ H₁₄ O₆IT 10508-41-5DP, 4,4''''-Dihydroxy-p-quaterphenyl, polymers with
bis(hydroxyethyl) adipate and poly(dimethylsiloxane) 126843-01-4P
RL: PREP (Preparation)
(manufacture of high-melting)
RN 10508-41-5 HCPLUS
CN [1,1':4',1'':4'',1''':4''':1''''-Quaterphenyl]-4,4''''-diol (9CI) (CA INDEX NAME)



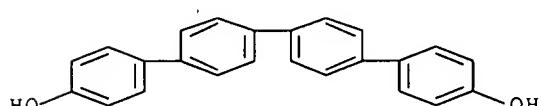
RN 126843-01-4 HCPLUS

CN 1,4-Benzenedicarboxylic acid, dimethyl ester, polymer with 1,4-butanediol, dimethyl hexanedioate and [1,1':4',1'':4'',1'''-quaterphenyl]-4,4'''-diol (9CI) (CA INDEX NAME)

CM 1

CRN 10508-41-5

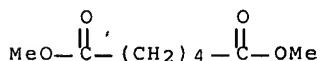
CMF C24 H18 O2



CM 2

CRN 627-93-0

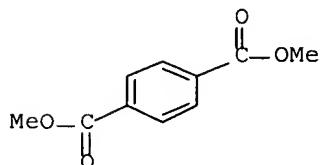
CMF C8 H14 O4



CM 3

CRN 120-61-6

CMF C10 H10 O4



CM 4

CRN 110-63-4

CMF C4 H10 O2

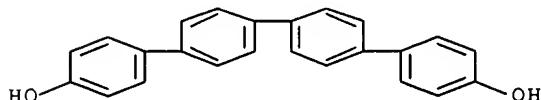
HO—(CH₂)₄—OH

IT 10508-41-5P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation and ethoxylation of)

RN 10508-41-5 HCPLUS

CN [1,1':4',1'':4'',1''':-Quaterphenyl]-4,4''':-diol (9CI) (CA INDEX NAME)



IT 126842-95-3, Bis(2-hydroxyethyl) adipate-4,4''':-dihydroxy-p-
 quaterphenyl copolymer 126842-96-4 126842-98-6
 126842-99-7 126843-03-6

RL: USES (Uses)
 (rubber, thermoplastic, manufacture of heat-resistant)

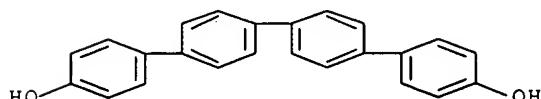
RN 126842-95-3 HCPLUS

CN Hexanedioic acid, bis(2-hydroxyethyl) ester, polymer with
 [1,1':4',1'':4'',1''':-quaterphenyl]-4,4''':-diol (9CI) (CA INDEX NAME)

CM 1

CRN 10508-41-5

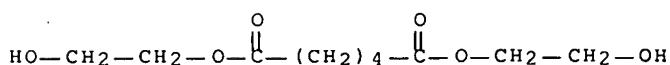
CMF C24 H18 O2



CM 2

CRN 1700-12-5

CMF C10 H18 O6



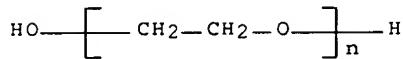
RN 126842-96-4 HCPLUS

CN Hexanedioic acid, bis(2-hydroxyethyl) ester, polymer with
 α -hydro- ω -hydroxypoly(oxy-1,2-ethanediyl) and
 [1,1':4',1'':4'',1''':-quaterphenyl]-4,4''':-diol, block (9CI) (CA INDEX NAME)

NAME)

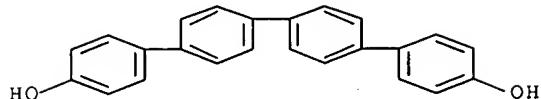
CM 1

CRN 25322-68-3
 CMF (C₂ H₄ O)_n H₂ O
 CCI PMS



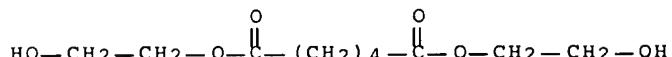
CM 2

CRN 10508-41-5
 CMF C₂₄ H₁₈ O₂



CM 3

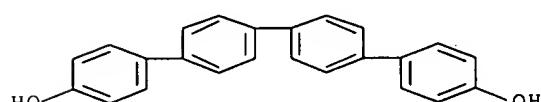
CRN 1700-12-5
 CMF C₁₀ H₁₈ O₆



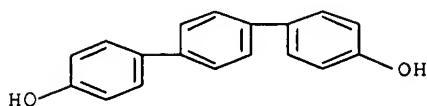
RN 126842-98-6 HCAPLUS
 CN Hexanedioic acid, bis(2-hydroxyethyl) ester, polymer with
 [1,1':4',1'':4'',1''':quaterphenyl]-4,4'''-diol and [1,1':4',1'':
 terphenyl]-4,4'''-diol (9CI) (CA INDEX NAME)

CM 1

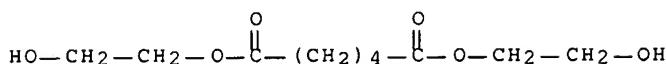
CRN 10508-41-5
 CMF C₂₄ H₁₈ O₂



CM 2

CRN 4084-45-1
CMF C18 H14 O2

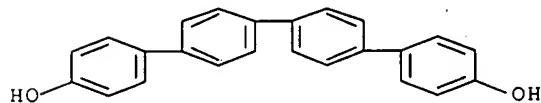
CM 3

CRN 1700-12-5
CMF C10 H18 O6

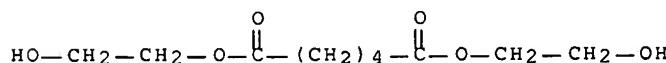
RN 126842-99-7 HCAPLUS

CN Hexanedioic acid, bis(2-hydroxyethyl) ester, polymer with 1,4-benzenediol and [1,1':4',1'':4'',1'''-quaterphenyl]-4,4'''-diol (9CI) (CA INDEX NAME)

CM 1

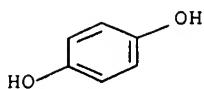
CRN 10508-41-5
CMF C24 H18 O2

CM 2

CRN 1700-12-5
CMF C10 H18 O6

CM 3

CRN 123-31-9
CMF C6 H6 O2



RN 126843-03-6 HCPLUS

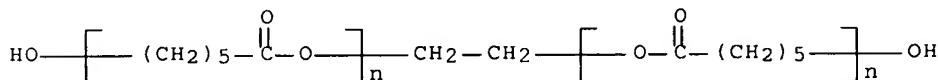
CN Hexanedioic acid, bis(2-hydroxyethyl) ester, polymer with
 α, α' -1,2-ethanediylbis[ω -hydroxypoly[oxy(1-oxo-1,6-hexanediyl)]] and [1,1':4',1'':4'',1'''-quaterphenyl]-4,4'''-diol, block (9CI) (CA INDEX NAME)

CM 1

CRN 59692-54-5

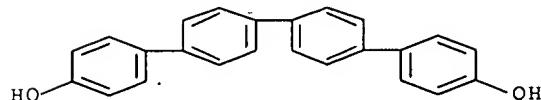
CMF (C₆ H₁₀ O₂)_n (C₆ H₁₀ O₂)_n C₂ H₆ O₂

CCI PMS



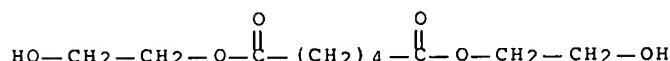
CM 2

CRN 10508-41-5

CMF C₂₄ H₁₈ O₂

CM 3

CRN 1700-12-5

CMF C₁₀ H₁₈ O₆

L4 ANSWER 158 OF 161 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1990:199905 HCPLUS Full-text

DOCUMENT NUMBER: 112:199905

TITLE: Moldable engineering plastics containing quaterphenyl derivatives

INVENTOR(S): Uesaka, Toshio; Niki, Akihiro; Ohsuga, Makoto; Saito, Toranosuke; Tsunomachi, Hiroki; Yamaguchi, Makoto; Doyama, Kazuo; Kishimoto, Daishiro

PATENT ASSIGNEE(S): Sekisui Chemical Co. Ltd., Japan; Sanko Kaihatsu Kagaku Kenkyusho

SOURCE: Eur. Pat. Appl., 44 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 343606	A1	19891129	EP 1989-109288	19890523 <--
EP 343606	B1	19950118		
R: DE, FR, GB, IT, NL, SE				
AU 8935070	A	19891130	AU 1989-35070	19890523 <--
AU 621887	B2	19920326		
US 5011879	A	19910430	US 1989-356725	19890525 <--
CA 1331900	C	19940906	CA 1989-600688	19890525 <--
JP 02276865	A	19901113	JP 1989-133371	19890526 <--
JP 07062091	B	19950705		
KR 9706903	B1	19970430	KR 1989-7083	19890526 <--
JP 1988-129174 A 19880526 <--				
JP 1988-129175 A 19880526 <--				
JP 1988-129176 A 19880526 <--				
JP 1988-129177 A 19880526 <--				
JP 1988-216873 A 19880831 <--				
JP 1988-216875 A 19880831 <--				
JP 1988-304605 A 19881130 <--				
JP 1988-304606 A 19881130 <--				
JP 1988-304607 A 19881130 <--				
JP 1988-304608 A 19881130 <--				
JP 1989-15682 A 19890125 <--				

PRIORITY APPLN. INFO.:

OTHER SOURCE(S): MARPAT 112:199905

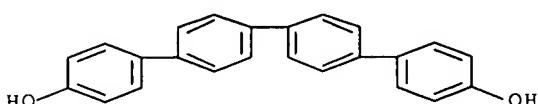
AB The title compns., with good flow, heat resistance, and mech. properties, contain 0.1-15 phr p-quarterphenyl or substituted derivative. Thus, Ultem 1000 (polyether-polyimide) containing 5 phr 4,4'''-p-quarterphenyldiol (I) had melt viscosity at 340° 6300 P, tensile modulus 32,000 kg/cm², and tensile strength 1100 kg/cm²; vs. 12,000, 3100, and 1080, resp., without I.

IT 10508-41-5

RL: USES (Uses)
(flow improvers, for plastic moldings)

RN 10508-41-5 HCPLUS

CN [1,1':4',1'':4'',1'''-Quaterphenyl]-4,4'''-diol (9CI) (CA INDEX NAME)



L4 ANSWER 159 OF 161 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1967:454802 HCPLUS Full-text

DOCUMENT NUMBER: 67:54802

TITLE: Photo- and thermostabilization of polyamides

INVENTOR(S): Tokareva, L. G.; Mikhailov, N. V.; Potemkina, Z. I.;
 Borik, A. G.; Nagdaseva, I. P.

PATENT ASSIGNEE(S): All-Union Scientific-Research Institute of Synthetic
 Fibers

SOURCE: U.S.S.R. From: Izobret., Prom. Obraztsy, Tovarnye
 Znaki 1966, 43(18), 103.

CODEN: URXXXAF

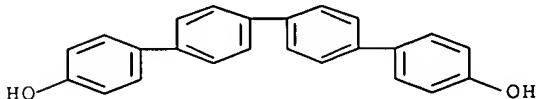
DOCUMENT TYPE: Patent

LANGUAGE: Russian

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

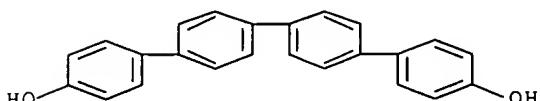
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
SU 186124		19660912	SU	19630315 <--
AB	Polyamides are photo- and thermostabilized by introduction of p,p'-dihydroxydiphenyl or p,p'-dihydroxyquaterphenyl as stabilizer. The discoloring of polyamide articles is thus prevented.			
IT	10508-41-5			
	RL: USES (Uses)			
	(as stabilizer for nylon)			
RN	10508-41-5	HCAPLUS		
CN	[1,1':4',1'':4'',1''':Quaterphenyl]-4,4'''-diol (9CI) (CA INDEX NAME)			



L4 ANSWER 160 OF 161 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1966:430224 HCAPLUS Full-text
 DOCUMENT NUMBER: 65:30224
 ORIGINAL REFERENCE NO.: 65:5630a-b
 TITLE: Ultraviolet light-polarizing films
 INVENTOR(S): Blout, Elkan R.; Bird, George R.
 PATENT ASSIGNEE(S): Polaroid Corp.
 SOURCE: 2 pp.
 DOCUMENT TYPE: Patent
 LANGUAGE: Unavailable
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3254562		19660607	US 1961-147756	19611026 <--
AB	The following p,p'-dihydroxypolyphenyls are uv polarizers with high dichroic ratios: biphenyl, terphenyl, quaterphenyl, 4,4'- dihydroxybiphenyl, 4,4'''- dihydroxyterphenyl (I), 4,4'''- dihydroxyquaterphenyl, and 3,5-dichlorobiphenyl. Thus, a film of poly(vinyl alc.) (about 2 mils) was stretched to .apprx.4 times its initial length and immersed in a staining bath, consisting of a saturated solution of I in 1:20 Me2CO-H2O. The soaked film was restretched to 110% of its initial stretched length, air-dried, and slightly baked. The resulting polarizer had a dichroic ratio of about 6-8 in the 300 ±40 mp spectral region.			
IT	10508-41-5, p-Quaterphenyl-4,4'''-diol			

(vinyl acetate polymers treated and, as ultraviolet-light polarizer)
 RN 10508-41-5 HCAPLUS
 CN [1,1':4',1'':4'',1'''-Quaterphenyl]-4,4'''-diol (9CI) (CA INDEX NAME)



L4 ANSWER 161 OF 161 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1941:4524 HCAPLUS Full-text

DOCUMENT NUMBER: 35:4524

ORIGINAL REFERENCE NO.: 35:737f-i,738a-d

TITLE: Quaterphenyl. I. Some dihydroxy derivatives

AUTHOR(S): Harley-Mason, John; Mann, Frederick G.

SOURCE: Journal of the Chemical Society (1940)

1379-85

CODEN: JCSOA9; ISSN: 0368-1769

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

AB 4-IC₆H₄C₆H₄OMe-4 (8 g.) and 5 g. Cu bronze, heated in a N atmospheric for 1 hr. at 280°, give 4,4'''-dimethoxyquaterphenyl (I), 4-MeOC₆H₄(C₆H₄)₂C₆H₄OMe-4 (this system of numbering the substituents differs from that used by C. A. in the Third Decennial Index), m. 335-8°; the yield is less on heating in air. I also results from 4-MeOC₆H₄C₆H₄MgBr (prepared with the use of EtMgBr) in C₆H₆ by boiling with anhydrous CuCl₂ for 3 hrs. (2.9 g. from 10 g. Br derivative). CrO₃ oxidation of I gives (4-HO₂CC₆H₄)₂ in 85% yields. Boiling I with HI in AcOH at 180° for 4 hrs. and acetylation give the 4,4'''-di-Ac derivative, m. 325° (decomposition), of 4,4'''-dihydroxyquaterphenyl (II), m. 419-22°; the EtOH-KOH solution has a marked greenish blue fluorescence. II has no estrogenic activity. (ClCH₂CO)₂O gives the di(chloroacetoxy) derivative, decomp. 360°. II could not be oxidized by PbO₂, SeO₂ or CrO₃ in C₅H₅N; in AcOH CrO₃ gives a nearly quant. yield of (p-HO₂CC₆H₄)₂; the reaction was rather more rapid than with I. Addition of 10.8 g. of Cu bronze to 39 g. of 4-IC₆H₄C₆H₄NO₂-4 at 240° and heating 6 hrs. at 235-45° with occasional shaking, give 3.2 g. of 4,4'''-dinitroquaterphenyl (III), yellow, m. 317-20° (after sublimation at 320° and 0.01 mm.). Direct nitration of Ph(C₆H₄)₂Ph (IV) either produced unchanged IV or a mixture of poly-NO₂ derivs. Oxidation of III with CrO₃ gives 4-nitrobi-phenyl-4'-carboxylic acid, m. 338-40°, thus differing in the method of cleavage from I and II. Passing dry HCl through 2.7 g. of III and 12 g. SnCl₂ in 200 cc. boiling AcOH for 5 hrs., decomposition of the product with 20% aqueous NaOH and sublimation at 310-20° and 0.01 mm., yield the 4,4'''-di-NH₂ derivative, m. 312-15° (decomposition); di-Ac derivative, decomp. 385°; the diazo reaction in H₂SO₄ gives II; the yield makes the method inferior to the use of I. (4-AcNH₂C₆H₄)₂ (10 g.) in Ac₂O-AcOH and N₂O₃ fumes give after 4.5 hrs. 9 g. of N,N'-bisnitrosoacetylbenzidine, yellow, explodes at 84-7°; reaction with PhOMe did not give the expected I, nor could it be prepared from (XN₂C₆H₄)₂ with PhOMe. Reaction of 4-BrC₆H₄N₂Cl (from 215 g. amine) with excess of PhOMe gives 64 g. of 4'-bromo-2-methoxybiphenyl (V), m. 62-3°, and 22 g. of 4-BrC₆H₄C₆H₄OMe-4 (VI), which may be separated by steam distillation; similarly 217 g. 4-IC₆H₄N₂Cl gives 27 g. of 4'-iodo-2-methoxybiphenyl (VII), m. 61-3°, 4-IC₆H₄C₆H₄OMe-4 and some p-C₆H₄I₂ 4'-O₂NC₆H₄C₆H₄OH-2 yields an Ac derivative, m. 142-5°; the 2-Me ether b30 235-40°, m. 62-4°; reduction of the latter with Fe in 70% EtOH containing a little AcOH gives 4'-amino-2-methoxybiphenyl, analyzed as the HCl salt and the Ac derivative, m. 147-8°. The diazo reaction with CuBr gives V or with KI

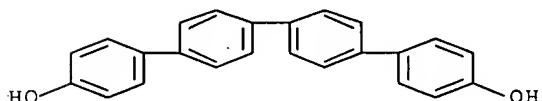
in dilute H₂SO₄ VII. V (4 g.) and Cu bronze in a N atmospheric (1 hr. at 280°) give 1.5 g. of 2,2'''-dimethoxyquaterphenyl (VIII), m. 188-9°, which is also prepared through the Grignard reagent; boiling with HI in AcOH gives the 2,2'''-di-HO derivative (IX), m. 238-40°; di-Ac derivative, m. 221-4°; di(chloroacetoxy)derivative, m. 166-9°; di-o-nitrobenzoyl derivative, m. 190-2°. The Grignard reagent from a mixture of V and VI, boiled with CuCl₂, gives a mixture of I, VIII and 2,4'''-dimethoxyquaterphenyl (X), m. 223-4°; X is less soluble in most solvents than VIII and much more soluble than I; VIII was extracted with boiling EtOHC₆H₆ (2: 1) and X was separated from I by extraction with PhMe. The solns. of X have a marked violet fluorescence. 2,4'''-Dihydroxyquaterphenyl, m. 268-70°; di-Ac derivative, m. 189-92°; di(chloroacetoxy) derivative, m. 158-60°; di-o-nitrobenzoyl derivative, m. 206-8°. Oxidation of IX and X and the Me ethers gives (4-HO₂CC₆H₄)₂.

IT 10508-41-5P, 4,4'''-p-Quaterphenyldiol

RL: PREP (Preparation)
(preparation of)

RN 10508-41-5 HCAPLUS

CN [1,1':4',1'':4'',1'''-Quaterphenyl]-4,4'''-diol (9CI) (CA INDEX NAME)



SEARCH HISTORY

Search performed on 7 January 2007, completed on 8 January 2007:

=> d his

(FILE 'HOME' ENTERED AT 16:22:35 ON 07 JAN 2007)

FILE 'HCAPLUS' ENTERED AT 16:22:51 ON 07 JAN 2007
E SATOMI KOUJI/AU

L1 4 S E3
E OONO HIROYASU/AU
L2 31 S E3
E EKAWA KENJI/AU
L3 9 S E3
L4 1 S L1 AND L2 AND L3
SELECT RN L4 1-1

FILE 'REGISTRY' ENTERED AT 16:23:31 ON 07 JAN 2007
L5 14 S E1-14

FILE 'HCAPLUS' ENTERED AT 16:23:36 ON 07 JAN 2007
L6 1 S L4 AND L5

FILE 'REGISTRY' ENTERED AT 16:24:28 ON 07 JAN 2007
L7 STR
L8 4 S L7
L9 161 S L7 FUL

FILE 'HCAPLUS' ENTERED AT 16:27:39 ON 07 JAN 2007
L10 162 S L9
L11 161 S L10 AND (PRD<20050929 OR PD<20050929)
L12 4 S L11 AND METHOD

FILE 'REGISTRY' ENTERED AT 16:29:41 ON 07 JAN 2007
L13 STR L7
L14 0 S L13
L15 0 S L13 FUL
L16 STR L13
L17 0 S L16
L18 STR L16
L19 0 S L18
L20 0 S L11 AND (?THERM? OR ?HEAT?)

FILE 'HCAPLUS' ENTERED AT 16:43:33 ON 07 JAN 2007
L21 121 S L11 AND (?THERM? OR ?HEAT?)
L22 2 S L21 AND ?ALKALI?(3A) ?CATALYST?

FILE 'REGISTRY' ENTERED AT 16:44:11 ON 07 JAN 2007
SAV L7 GAL358L7/L

FILE 'HCAPLUS' ENTERED AT 16:45:56 ON 07 JAN 2007
SAV L11 GAL358L11/A

FILE 'REGISTRY' ENTERED AT 16:47:00 ON 07 JAN 2007
L23 STRUCTURE 256345-96-7
L24 0 S L23
L25 4 S L23 FUL

10/531,358

FILE 'HCAPLUS' ENTERED AT 16:47:52 ON 07 JAN 2007

L26 2 S L25

L27 2 S L26 AND (PRD<20050929 OR PD<20050929)

=> d his ful

(FILE 'HOME' ENTERED AT 11:14:14 ON 08 JAN 2007)

FILE 'HCAPLUS' ENTERED AT 11:14:40 ON 08 JAN 2007

ACT GAL358L11/A

L1 STR

L2 (161)SEA SSS FUL L1

L3 (162)SEA ABB=ON L2

L4 161 SEA ABB=ON L3 AND (PRD<20050929 OR PD<20050929) (** cit's 142-161
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FILE HCAPLUS

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FILE LAST UPDATED: 7 Jan 2007 (20070107/ED)

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FILE USPATFULL

FILE COVERS 1971 TO PATENT PUBLICATION DATE: 4 Jan 2007 (20070104/PD)

FILE LAST UPDATED: 4 Jan 2007 (20070104/ED)

HIGHEST GRANTED PATENT NUMBER: US7159245

HIGHEST APPLICATION PUBLICATION NUMBER: US2007006355

CA INDEXING IS CURRENT THROUGH 4 Jan 2007 (20070104/UPCA)

ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 4 Jan 2007 (20070104/PD)

REVISED CLASS FIELDS (/NCL) LAST RELOADED: Jun 2006

USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Jun 2006

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DICTIONARY FILE UPDATES: 4 JAN 2007 HIGHEST RN 916790-89-1

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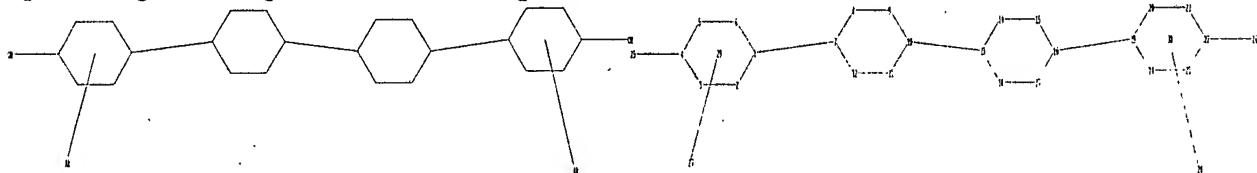
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25 26 27 28  
ring nodes :  
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23  
24
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chain bonds :
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ring bonds :
1-2 1-6 2-3 3-4 4-5 5-6 7-8 7-12 8-9 9-10 10-11 11-12 13-14 13-18
14-15 15-16 16-17 17-18 19-20 19-24 20-21 21-22 22-23 23-24
exact/norm bonds :
1-2 1-6 2-3 3-4 4-5 4-25 5-6 7-8 7-12 8-9 9-10 10-11 11-12 13-14
13-18 14-15 15-16 16-17 17-18 19-20 19-24 20-21 21-22 22-23 22-26 23-24
exact bonds :
1-7 10-13 16-19

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom
11:Atom 12:Atom 13:Atom 14:Atom 15:Atom 16:Atom 17:Atom 18:Atom 19:Atom
20:Atom 21:Atom 22:Atom 23:Atom 24:Atom 25:CLASS 26:CLASS 27:CLASS 28:CLASS
29:CLASS 30:CLASS

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=> D L1
L1 HAS NO ANSWERS
L1 STR
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

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INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
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FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
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PROJECTED ANSWERS: 0 TO 0

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SEARCH TIME: 00.00.02

L3 7 SEA SSS FUL L1

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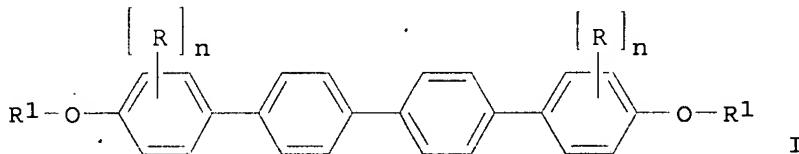
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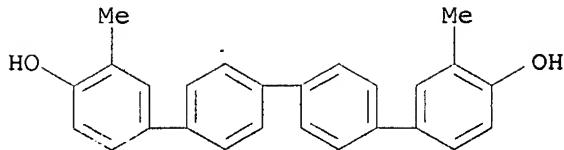
=> D BIB ABS HITSTR 1-6

L4 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2005:1073935 CAPLUS
DN 143:346905
TI Preparation of 4,4'''-dialkoxy-p-quaterphenyls from 4,4'''-dihydroxy-p-quaterphenyls
IN Satomi, Akifumi; Egawa, Kenji; Ono, Hiroyasu
PA Honshu Chemical Industry Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 18 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1
PATENT NO. KIND DATE APPLICATION NO. DATE

PI JP 2005272375 A 20051006 JP 2004-89600 20040325
PRAI JP 2004-89600 20040325
OS MARPAT 143:346905
GI

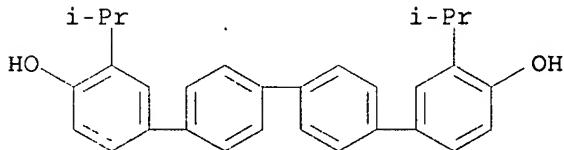


AB 4,4'''-Dialkoxy-p-quaterphenyls I [R = Me, Et, (iso)propyl; R1 = C1-8 alkyl when R = Me; R1 = C1-20 alkyl when R = Et, iso(propyl)], showing liquid crystalline properties, are prepared by treatment of 4,4'''-dihydroxy-p-quaterphenyls I [R = Me, Et, iso(propyl); R1 = H] with R1X (R1 = C1-20 alkyl; X = halo) in the presence of alkalis. Thus, 3,3'''-diisopropyl-4,4'''-dihydroxy-p-quaterphenyl was treated with octyl chloride in the presence of NaOH to give 87.1% 3,3'''-diisopropyl-4,4'''-dioctyloxy-p-quaterphenyl.
IT 864227-53-2P 864227-55-4P 864227-57-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of liquid crystalline dialkoxy-p-quaterphenyls by treatment of etherification of dihydroxy-p-quaterphenyls with alkyl halides)
RN 864227-53-2 CAPLUS
CN [1,1':4',1'':4'',1'''-Quaterphenyl]-4,4'''-diol, 3,3'''-dimethyl- (9CI)
(CA INDEX NAME)



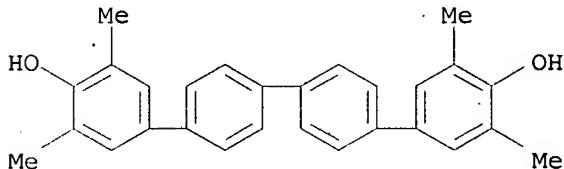
RN 864227-55-4 CAPLUS

CN [1,1':4',1'':4'',1''':-Quaterphenyl]-4,4''':-diol, 3,3''':-bis(1-methylethyl)-
(9CI) (CA INDEX NAME)



RN 864227-57-6 CAPLUS

CN [1,1':4',1'':4'',1''':-Quaterphenyl]-4,4''':-diol, 3,3''',5,5''':-tetramethyl-
(9CI) (CA INDEX NAME)



L4 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2005:1003166 CAPLUS

DN 143:286821

TI Liquid crystalline 4,4-dihydroxy-p-quarterphenyls and their manufacture

IN Satomi, Akifumi; Egawa, Kenji; Ono, Hiroyasu

PA Honshu Chemical Industry Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 15 pp.

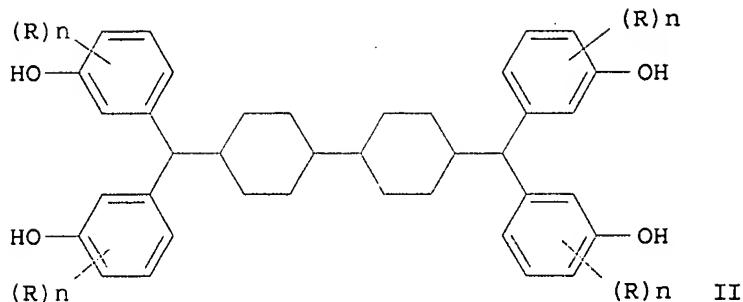
CODEN: JKXXAF

DT Patent

LA Japanese

FAN CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2005247809	A	20050915	JP 2004-64056	20040308
PRAI	JP 2004-64056		20040308		
OS	MARPAT 143:286821				
GI					



AB P-HOC₆H₄-nRn-p-C₆H₄-p-C₆H₄C₆H₄-nRnOH-p (I; R = C₁-3 alkyl; n = 1-3), useful for liquid crystal displays, photoresists, polyesters, polycarbonates, etc. (no data), are manufactured by thermal decomposition of bicyclohexanes II (R, n = same as I) in solvents and dehydrogenation of the resulting 4,4'-di(hydroxyphenyl)bicyclohexenes in solvents in the presence of catalysts. Thus, 4,4'-di(3-methyl-4-hydroxyphenyl)bicyclohexene-3 was dehydrogenated in the presence of Pd/C and α -methylstyrene in tetraethylene glycol at .apprx.160° for 6 h to give 71.1% I (Rn = 3-Me).

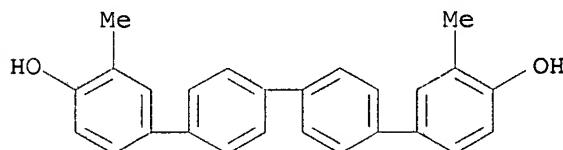
IT 864227-53-2P 864227-55-4P 864227-57-6P

RL: IMF (Industrial manufacture); PREP (Preparation)
(manufacture of liquid crystalline dihydroxyquarterphenyls by thermal decomposition of

tetrakis(hydroxyphenyl)bicyclohexanes and dehydrogenation)

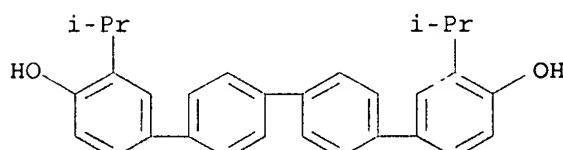
RN 864227-53-2 CAPLUS

CN [1,1':4',1'':4'',1''':Quaterphenyl]-4,4''':diol, 3,3''':dimethyl- (9CI)
(CA INDEX NAME)



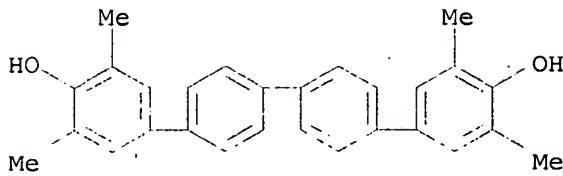
RN 864227-55-4 CAPLUS

CN [1,1':4',1'':4'',1''':Quaterphenyl]-4,4''':diol, 3,3''':bis(1-methylethyl)- (9CI) (CA INDEX NAME)



RN 864227-57-6 CAPLUS

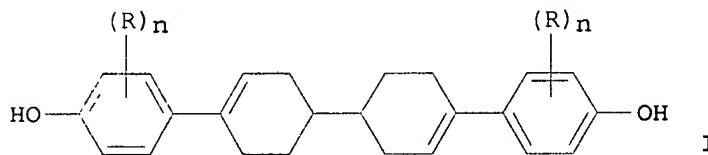
CN [1,1':4',1'':4'',1''':Quaterphenyl]-4,4''':diol, 3,3''',5,5''':tetramethyl- (9CI) (CA INDEX NAME)



L4 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN
 AN 2004:354897 CAPLUS
 DN 140:357058
 TI Preparation of novel 4,4'-bis(hydroxyphenyl)bicyclohexene and its derivatives
 IN Satomi, Kouji; Oono, Hiroyasu; Ekawa, Kenji
 PA Honshu Chemical Industry Co., Ltd., Japan
 SO PCT Int. Appl., 20 pp.
 CODEN: PIXXD2
 DT Patent
 LA Japanese
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004035513 W: JP, US US 2006129001	A1	20040429	WO 2003-JP13222 US 2005-531358	20031016 20050929
PRAI	JP 2002-302887 WO 2003-JP13222	A W	20021017 20031016		
OS	CASREACT 140:357058; MARPAT 140:357058				

GI

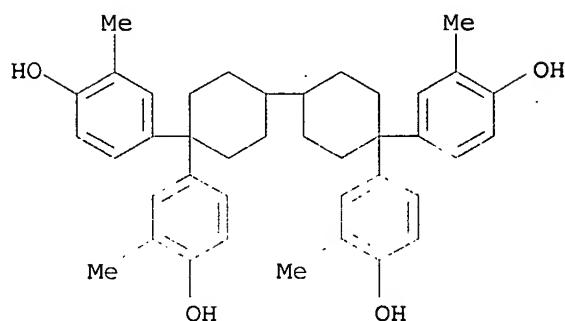


AB Novel 4,4'-bis(hydroxyphenyl)bicyclohexenes (I; R = C1-4 alkyl; n = an integer of 0-3) are produced by thermally decomposing 4,4,4',4'-tetrakis(hydroxyphenyl)bicyclohexanes preferably in the presence of an alkaline catalyst. The 4,4'-dihydroxyphenyl-bicyclohexenes are useful as synthetic resin materials for liquid crystal polyester, polycarbonate, polyurethane and the like, or materials for photoresists of display devices, semiconductors and the like. Thus, phenol was condensed with 4,4'-bicyclohexanone in the presence of dry HCl, dodecyl mercaptan, and methanol at 40° for 20 h to give 89.6% 4,4,4',4'-tetrakis(4-hydroxyphenyl)-1,1'-bicyclohexane which was heated in tetraethylene glycol in the presence of NaOH under reduced pressure (3.0 kpa) with removal of water at 203° for 3 h followed by neutralization with acetic acid to pH 6.0 to give 73.4% 4,4,4',4'-tetrakis(4-hydroxyphenyl)-1,1'-bicyclohex-3-ene.
 IT 256345-93-4P, 4,4,4',4'-Tetrakis(3-methyl-4-hydroxyphenyl)-1,1'-bicyclohexane 256345-96-7P, 4,4,4',4'-Tetrakis(3,5-dimethyl-4-hydroxyphenyl)-1,1'-bicyclohexane 682759-50-8P, 4,4,4',4'-Tetrakis(3-isopropyl-4-hydroxyphenyl)-1,1'-bicyclohexane
 RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (preparation of 4,4'-bis(hydroxyphenyl)bicyclohexene by thermal decomposition of 4,4,4',4'-tetrakis(hydroxyphenyl)bicyclohexane in presence of alkaline

catalyst)

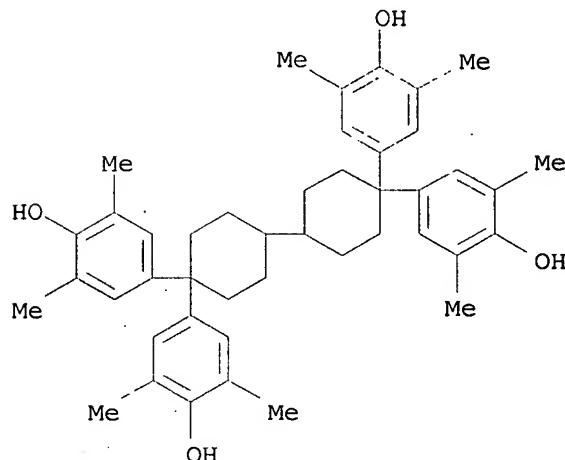
RN 256345-93-4 CAPLUS

CN Phenol, 4,4',4'',4'''-[1,1'-bicyclohexyl]-4,4'-diylidenetetrakis[2-methyl-
(9CI) (CA INDEX NAME)



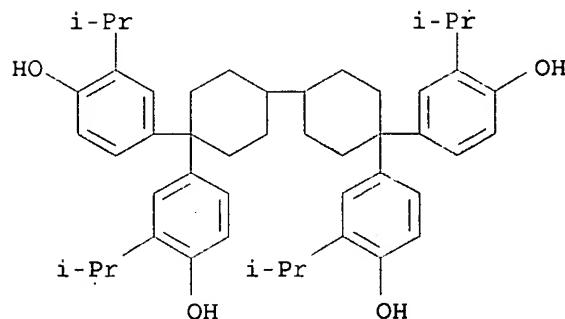
RN 256345-96-7 CAPLUS

CN Phenol, 4,4',4'',4'''-[1,1'-bicyclohexyl]-4,4'-diylidenetetrakis[2,6-dimethyl-
(9CI) (CA INDEX NAME)



RN 682759-50-8 CAPLUS

CN Phenol, 4,4',4'',4'''-[1,1'-bicyclohexyl]-4,4'-diylidenetetrakis[2-(1-methylethyl)-
(9CI) (CA INDEX NAME)



RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

AN 2000:77105 CAPLUS

DN 132:123036

TI Tetrakis(hydroxyphenyl)dicyclohexane compounds

IN Kawasaki, Shinsaku; Kawahara, Mikio; Egawa, Takeshi

PA Honshu Chemical Industry Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000034248	A	20000202	JP 1998-200736	19980715
	JP 3830666	B2	20061004		

PRAI JP 1998-200736 19980715

OS MARPAT 132:123036

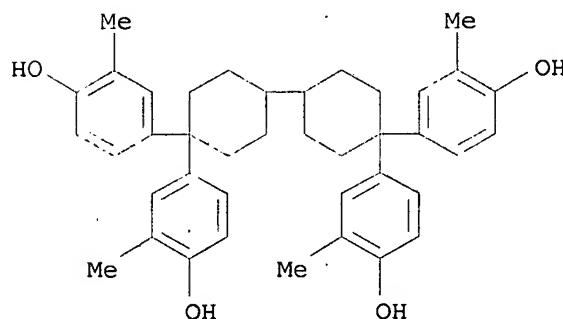
AB The title compds. useful for curing or modifying epoxy resins (no data), are R2ZR2 (Z = dicyclohexane-4,4'-diyl; R = hydroxyphenyl group which is optionally substituted with C1-4 alkyl, C5-6 cycloalkyl and Ph group). Thus, flushing dry HCl gas into a mixture of phenol 55.88, octyl mercaptan 1.94 and water 2.25 while stirring, adding a mixture of 4,4'-bicyclohexanone 19.4 and phenol 19.4 g to the mixture over 50 min and working up gave 4,4,4',4'-tetra(4-hydroxyphenyl)bicyclohexyl.

IT 256345-93-4P 256345-96-7P

RL: IMF (Industrial manufacture); PREP (Preparation)
(manufacture of tetrakis(hydroxyphenyl)dicyclohexane compds.)

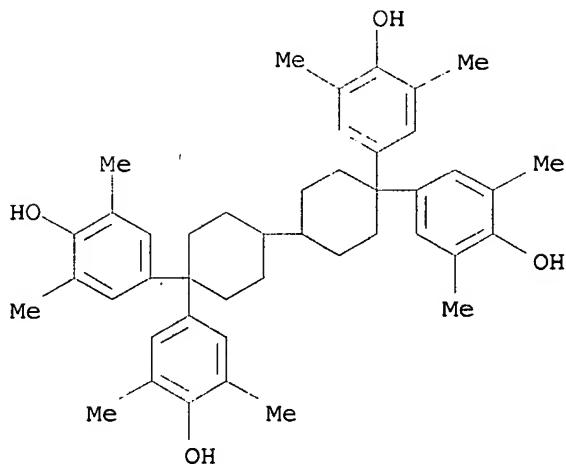
RN 256345-93-4 CAPLUS

CN Phenol, 4,4',4'',4'''-[1,1'-bicyclohexyl]-4,4'-diylidene[2-methyl- (9CI) (CA INDEX NAME)

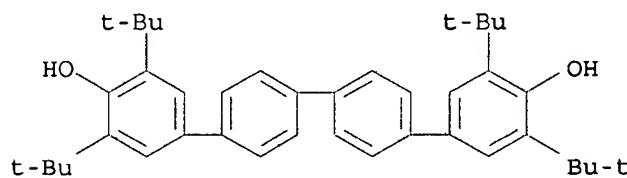


RN 256345-96-7 CAPLUS

CN Phenol, 4,4',4'',4'''-[1,1'-bicyclohexyl]-4,4'-diylidene[2,6- dimethyl- (9CI) (CA INDEX NAME)



L4 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN
 AN 1996:514239 CAPLUS
 DN 125:247101
 TI Synthesis, EPR spectroscopy and voltammetry of a p-quaterphenyl
 biradical/Quinone
 AU Rebmann, Andreas; Zhou, Jinkui; Schuler, Paul; Stegmann, Hartmut B.;
 Rieker, Anton
 CS Inst. of Organic Chemistry, Univ. of Tuebingen, Tuebingen, D-72076,
 Germany
 SO Journal of Chemical Research, Synopses (1996), (7), 318-319
 CODEN: JRPSDC; ISSN: 0308-2342
 PB Royal Society of Chemistry
 DT Journal
 LA English
 AB 3,5,3'',5'''-Tetra-butyl-p-quaterphenyl-4,4'''-diyl-bis(oxyl) /-quinone ,
 a novel brown copper-glittering compound of metallic appearance, has been
 synthesized and investigated mainly by EPR spectroscopy and voltammetry.
 IT 181724-69-6P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (intermediate; preparation, ESR, and voltammetry of a p-quaterphenyl
 biradical/Quinone)
 RN 181724-69-6 CAPLUS
 CN [1,1':4'',1'':4''',1''''-Quaterphenyl]-4,4'''-diol, 3,3'',5,5'''-
 tetrakis(1,1-dimethylethyl)- (9CI) (CA INDEX NAME)



L4 ANSWER 6 OF 6 CASREACT COPYRIGHT 2007 ACS on STN
 AN 140:357058 CASREACT
 TI Preparation of novel 4,4'-bis(hydroxyphenyl)bicyclohexene and its
 derivatives
 IN Satomi, Kouji; Oono, Hiroyasu; Ekawa, Kenji
 PA Honshu Chemical Industry Co., Ltd., Japan
 SO PCT Int. Appl., 20 pp.

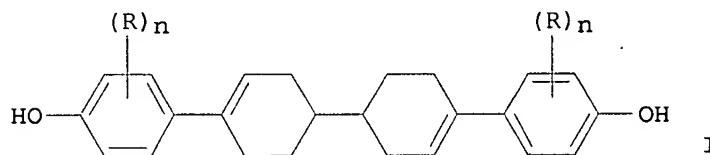
CODEN: PIXXD2

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004035513 W: JP, US US 2006129001	A1	20040429	WO 2003-JP13222	20031016
PRAI	JP 2002-302887 WO 2003-JP13222	20021017 20031016		US 2005-531358	20050929
OS	MARPAT 140:357058				
GI					



AB Novel 4,4'-bis(hydroxyphenyl)bicyclohexenes (I; R = C1-4 alkyl; n = an integer of 0-3) are produced by thermally decomposing 4,4,4',4'-tetrakis(hydroxyphenyl)bicyclohexanes preferably in the presence of an alkaline catalyst. The 4,4'-dihydroxyphenyl-bicyclohexenes are useful as synthetic resin materials for liquid crystal polyester, polycarbonate, polyurethane and the like, or materials for photoresists of display devices, semiconductors and the like. Thus, phenol was condensed with 4,4'-bicyclohexanone in the presence of dry HCl, dodecyl mercaptan, and methanol at 40° for 20 h to give 89.6% 4,4,4',4'-tetrakis(4-hydroxyphenyl)-1,1'-bicyclohexane which was heated in tetraethylene glycol in the presence of NaOH under reduced pressure (3.0 kpa) with removal of water at 203° for 3 h followed by neutralization with acetic acid to pH 6.0 to give 73.4% 4,4,4',4'-tetrakis(4-hydroxyphenyl)-1,1'-bicyclohex-3-ene.

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L2 0 S L1

L3 7 S L1 FULL

FILE 'CAPLUS, CASREACT, BEILSTEIN' ENTERED AT 13:48:56 ON 05 JAN 2007

L4 6 S L3

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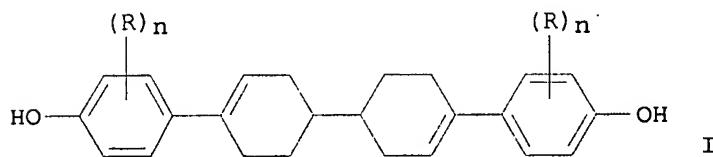
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NEWS 8 SEP 25 CAS REGISTRY(SM) no longer includes Concord 3D coordinates
NEWS 9 SEP 25 CAS REGISTRY(SM) updated with amino acid codes for pyrrolysine
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NEWS 11 OCT 19 LOGOFF HOLD duration extended to 120 minutes
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NEWS 17 NOV 03 JAPIO enhanced with IPC 8 features and functionality
NEWS 18 NOV 10 CA/CAplus F-Term thesaurus enhanced
NEWS 19 NOV 10 STN Express with Discover! free maintenance release Version 8.01c now available
NEWS 20 NOV 20 CAS Registry Number crossover limit increased to 300,000 in additional databases
NEWS 21 NOV 20 CA/CAplus to MARPAT accession number crossover limit increased to 50,000
NEWS 22 DEC 01 CAS REGISTRY updated with new ambiguity codes
NEWS 23 DEC 11 CAS REGISTRY chemical nomenclature enhanced
NEWS 24 DEC 14 WPIDS/WPINDEX/WPIX manual codes updated
NEWS 25 DEC 14 GBFULL and FRFULL enhanced with IPC 8 features and functionality
NEWS 26 DEC 18 CA/CAplus pre-1967 chemical substance index entries enhanced with preparation role
NEWS 27 DEC 18 CA/CAplus patent kind codes updated
NEWS 28 DEC 18 MARPAT to CA/CAplus accession number crossover limit increased

PI WO 2004035513 A1 20040429 WO 2003-JP13222 20031016
 W: JP, US
 US 2006129001 A1 20060615 US 2005-531358 20050929
 PRAI JP 2002-302887 A 20021017
 WO 2003-JP13222 W 20031016
 OS CASREACT 140:357058; MARPAT 140:357058
 GI



AB Novel 4,4'-bis(hydroxyphenyl)bicyclohexenes (I; R = C1-4 alkyl; n = an integer of 0-3) are produced by thermally decomposing 4,4,4',4'-tetrakis(hydroxyphenyl)bicyclohexanes preferably in the presence of an alkaline catalyst. The 4,4'-dihydroxyphenyl-bicyclohexenes are useful as synthetic resin materials for liquid crystal polyester, polycarbonate, polyurethane and the like, or materials for photoresists of display devices, semiconductors and the like. Thus, phenol was condensed with 4,4'-bicyclohexanone in the presence of dry HCl, dodecyl mercaptan, and methanol at 40° for 20 h to give 89.6% 4,4,4',4'-tetrakis(4-hydroxyphenyl)-1,1'-bicyclohexane which was heated in tetraethylene glycol in the presence of NaOH under reduced pressure (3.0 kpa) with removal of water at 203° for 3 h followed by neutralization with acetic acid to pH 6.0 to give 73.4% 4,4,4',4'-tetrakis(4-hydroxyphenyl)-1,1'-bicyclohex-3-ene.

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> s bicyclohexene
 L2 294 BICYCLOHEXENE

=> s hydroxy
 L3 1470773 HYDROXY

=> s 12 and 13
 L4 10 L2 AND L3

=> d bib abs hitstr1-10
 'HITSTR1-10' IS NOT A VALID FORMAT FOR FILE 'CAPLUS'

The following are valid formats:

ABS ----- GI and AB
 ALL ----- BIB, AB, IND, RE
 APPS ----- AI, PRAI
 BIB ----- AN, plus Bibliographic Data and PI table (default)
 CAN ----- List of CA abstract numbers without answer numbers
 CBIB ----- AN, plus Compressed Bibliographic Data
 CLASS ----- IPC, NCL, ECLA, FTERM
 DALL ----- ALL, delimited (end of each field identified)
 DMAX ----- MAX, delimited for post-processing
 FAM ----- AN, PI and PRAI in table, plus Patent Family data
 FBIB ----- AN, BIB, plus Patent FAM
 IND ----- Indexing data
 IPC ----- International Patent Classifications
 MAX ----- ALL, plus Patent FAM, RE
 PATS ----- PI, SO

SAM ----- CC, SX, TI, ST, IT
 SCAN ----- CC, SX, TI, ST, IT (random display, no answer numbers;
 SCAN must be entered on the same line as the DISPLAY,
 e.g., D SCAN or DISPLAY SCAN)
 STD ----- BIB, CLASS

 IABS ----- ABS, indented with text labels
 IALL ----- ALL, indented with text labels
 IBIB ----- BIB, indented with text labels
 IMAX ----- MAX, indented with text labels
 ISTD ----- STD, indented with text labels

 OBIB ----- AN, plus Bibliographic Data (original)
 OIBIB ----- OBIB, indented with text labels

 SBIB ----- BIB, no citations
 SIBIB ----- IBIB, no citations

 HIT ----- Fields containing hit terms
 HITIND ----- IC, ICA, ICI, NCL, CC and index field (ST and IT)
 containing hit terms
 HITRN ----- HIT RN and its text modification
 HITSTR ----- HIT RN, its text modification, its CA index name, and
 its structure diagram
 HITSEQ ----- HIT RN, its text modification, its CA index name, its
 structure diagram, plus NTE and SEQ fields
 FHITSTR ----- First HIT RN, its text modification, its CA index name, and
 its structure diagram
 FHITSEQ ----- First HIT RN, its text modification, its CA index name, its
 structure diagram, plus NTE and SEQ fields
 KWIC ----- Hit term plus 20 words on either side
 OCC ----- Number of occurrence of hit term and field in which it occurs

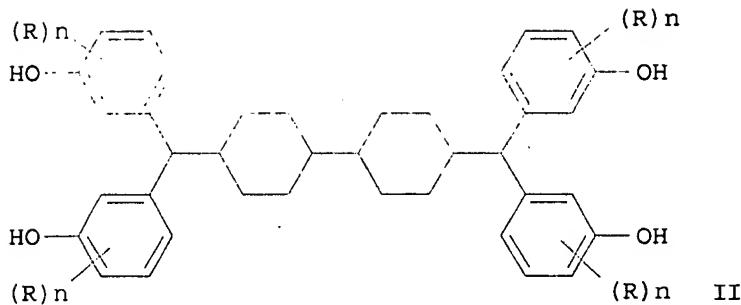
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 codes. For a list of the display field codes, enter HELP DFIELDS at
 an arrow prompt (=>). Examples of formats include: TI; TI,AU; BIB,ST;
 TI,IND; TI,SO. You may specify the format fields in any order and the
 information will be displayed in the same order as the format
 specification.

All of the formats (except for SAM, SCAN, HIT, HITIND, HITRN, HITSTR,
 FHITSTR, HITSEQ, FHITSEQ, KWIC, and OCC) may be used with DISPLAY ACC
 to view a specified Accession Number.

ENTER DISPLAY FORMAT (BIB):bib abs hitstr

L4 ANSWER 1 OF 10 CAPLUS COPYRIGHT 2007 ACS on STN
 AN 2005:1003166 CAPLUS
 DN 143:286821
 TI Liquid crystalline 4,4-dihydroxy-p-quarterphenyls and their manufacture
 IN Satomi, Akifumi; Egawa, Kenji; Ono, Hiroyasu
 PA Honshu Chemical Industry Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 15 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2005247809	A	20050915	JP 2004-64056	20040308
PRAI JP 2004-64056		20040308		
OS MARPAT 143:286821				
GI				



AB P-HOC₆H₄-nRn-p-C₆H₄-p-C₆H₄C₆H₄-nRnOH-p (I; R = Cl-3 alkyl; n = 1-3), useful for liquid crystal displays, photoresists, polyesters, polycarbonates, etc. (no data), are manufactured by thermal decomposition of bicyclohexanes II (R, n = same as I) in solvents and dehydrogenation of the resulting 4,4'-di(hydroxyphenyl)bicyclohexenes in solvents in the presence of catalysts. Thus, 4,4'-di(3-methyl-4-hydroxyphenyl)bicyclohexene-3 was dehydrogenated in the presence of Pd/C and α -methylstyrene in tetraethylene glycol at .apprx.160° for 6 h to give 71.1% I (Rn = 3-Me).

=> d bib abs hitstr 1-10

L4 ANSWER 1 OF 10 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2005:1003166 CAPLUS
DN 143:286821
TI Liquid crystalline 4,4-dihydroxy-p-quarterphenyls and their manufacture
IN Satomi, Akifumi; Egawa, Kenji; Ono, Hiroyasu
PA Honshu Chemical Industry Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 15 pp.

SPR. KOKAT 10
CODEN: JKXXAF

DT Patent
LA

LA Japanese
FAN GENE

FAN.CNT 1

PATENT

DE 10 2005 015 003

PI JP 2005247809
PRAT JP 2004 61956

PRAI JP 2004-64056
22 MARRATT 143 28

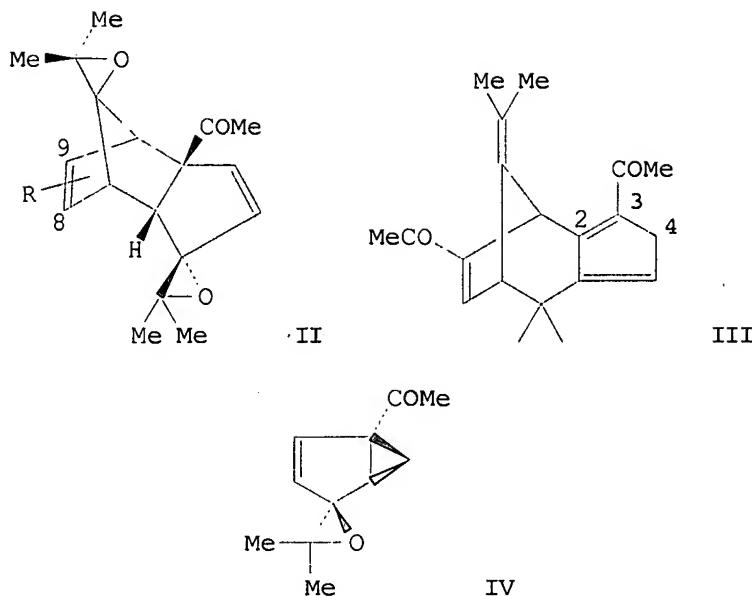
85
GK

AB P-HOC₆H₄-nRn-p-C₆H₄-p-C₆H₄C₆H₄-nRnOH-p (I; R = C1-3 alkyl; n = 1-3), useful for liquid crystal displays, photoresists, polyesters, polycarbonates, etc. (no data), are manufactured by thermal decomposition of bicyclohexanes II (R, n = same as I) in solvents and dehydrogenation of

the resulting 4,4'-di(hydroxyphenyl)bicyclohexenes in solvents in the presence of catalysts. Thus, 4,4'-di(3-methyl-4-hydroxyphenyl)bicyclohexene-3 was dehydrogenated in the presence of Pd/C and α -methylstyrene in tetraethylene glycol at .apprx.160° for 6 h to give 71.1% I (Rn = 3-Me).

L4 ANSWER 2 OF 10 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2003:827752 CAPLUS
DN 140:59344
TI Development of novel Lewis acid catalyzed cycloisomerizations: synthesis of bicyclo[3.1.0]hexenes and cyclopentenones
AU Miller, Aubry K.; Banghart, Matthew R.; Beaudry, Christopher M.; Suh, Judy M.; Trauner, Dirk
CS Center for New Directions in Organic Synthesis, Department of Chemistry, University of California, Berkeley, CA, 94720, USA
SO Tetrahedron (2003), 59(45), 8919-8930
CODEN: TETRAB; ISSN: 0040-4020
PB Elsevier Science B.V.
DT Journal
LA English
OS CASREACT 140:59344
AB The Lewis acid catalyzed cyclization of hexatrienes and pentadienals to bicyclo[3.1.0]hexenes and cyclopentenones, resp., was investigated. The application of the former reaction to the total synthesis of (\pm)-photodeoxytridachione, a molluscan polypropionate, [i.e., *rel*-2-methoxy-3,5-dimethyl-6-[(1S,4S,5R,6S)-1,3,6-trimethyl-4-[(1E)-1-methyl-1-butenyl]bicyclo[3.1.0]hex-2-en-6-yl]-4H-pyran-4-one] is described. Reaction of *rel*-1-[(1R,4R,5S,6R)-1,3,6-Trimethyl-4-[(1E)-1-methyl-1-butenyl]bicyclo[3.1.0]hex-2-en-6-yl]-1-propanone with gave (1R,4R,5S,6R)-*rel*- α , γ ,1,3,6-pentamethyl-4-[(1E)-1-methyl-1-butenyl]- β , δ -dioxobicyclo[3.1.0]hex-2-ene-6-pentanoic acid Me ester. Intramol. cyclization of the latter gave *rel*-4-hydroxy-3,5-dimethyl-6-[(1R,4R,5S,6R)-1,3,6-trimethyl-4-[(1E)-1-methyl-1-butenyl]bicyclo[3.1.0]hex-2-en-6-yl]-2H-pyran-2-one which was a precursor for (\pm)-photodeoxytridachion.
RE.CNT 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 3 OF 10 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1987:176674 CAPLUS
DN 106:176674
TI 4-(1-Hydroperoxy-1-methylethyl)-1,3-cyclopentadienyl methyl ketone: its formation from α -terpineol and behavior as a dimethylfulvene epoxide
AU Thomas, Alan F.; Perret, Celia
CS Res. Lab., Firmenich SA, Geneva, CH-1211/8, Switz.
SO Tetrahedron (1986), 42(12), 3311-21
CODEN: TETRAB; ISSN: 0040-4020
DT Journal
LA English
OS CASREACT 106:176674
GI



AB Ozonolysis of α -terpineol followed by steam distillation in the presence of acid gives 4-isopropylidenecyclopentenyl Me ketone, which is oxidized in air to 4-(1-hydroperoxy-1-methylethyl)-1,3-cyclopentadienyl Me ketone (I). I reacts as a dimethylfulvene epoxide, and is dimerized by silica gel to II (R = 8-MeCO, 9-MeCO). Thermolysis of II yields 4-acetyl-6,6-dimethyl-2,4-cyclohexadienone. With Ph3P I yields [6 + 4] dimers of a fulvene (III) and its $\Delta 3,4$ isomer. I adds CH₂N₂ to give an unstable pyrazoline which loses N₂ to yield a single bicyclo[3.1.0]hexenespirooxirane IV. Catalytic hydrogenation of IV involves epoxide ring opening.

L4 ANSWER 4 OF 10 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1985:560037 CAPLUS

DN 103:160037

TI Enthalpies of hydration of alkenes. 3. Cycloalkenes

AU Wiberg, Kenneth B.; Wasserman, David J.; Martin, Eric J.; Murcko, Mark A.

CS Dep. Chem., Yale Univ., New Haven, CT, 06511, USA

SO Journal of the American Chemical Society (1985), 107(21), 6019-22

CODEN: JACSAT; ISSN: 0002-7863

DT Journal

LA English

AB The enthalpies of reaction of cyclopentene, cyclohexene, 1-methylcyclopentene, methylenecyclopentane, 1-methylcyclohexene, methylenecyclohexane, bicyclo[2.2.1]hept-2-ene, and bicyclo[2.1.1]hex-2-ene with trifluoroacetic acid were measured. This gives the difference in energy between exo- and endocyclic double bonds with very good precision and gives differences in driving force for addition reactions in the bicyclic systems. In the series cyclopentene, bicycloheptene, and bicyclohexene, the enthalpies of reaction with trifluoroacetic acid are 9, 15, and 23 kcal/mol, resp. The enthalpies of conversion of the corresponding alcs. to the trifluoroacetates also were measured, allowing the enthalpies of formation of the alcs. to be determined. The enthalpy change for replacing a hydroxy group by Me is essentially constant for a given type of alc. (i.e., primary, secondary, or tertiary), but it varies considerably between groups.

L4 ANSWER 5 OF 10 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1981:568650 CAPLUS

DN 95:168650

TI Bicyclo[3.1.0]hexane derivative

IN Syrier, Johannes Leopold Marie
PA Shell Internationale Research Maatschappij B. V., Neth.
SO Brit. UK Pat. Appl., 7 pp.

CODEN: BAXXDU

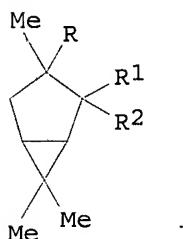
DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	GB 2058781	A	19810415	GB 1979-33836	19790928
	US 4284820	A	19810818	US 1980-189982	19800923
	US 4350820	A	19820921	US 1981-235182	19810217
	US 4350821	A	19820921	US 1981-235183	19810217
PRAI	GB 1979-33836	A	19790928		
	US 1980-189982	A3	19800923		

GI



AB The hydroxybicyclohexanone I ($R = OH$, $R1R2 = O$) (II) was prepared by treating I ($RR1 = bond$, $R2 = CHO$) (III) with a peroxy acid. The bicyclohexanes I ($RR1 = O$, $R2 = CHO$) (IV) and I ($RR1 = O$, $R2 = O2CH$) (V), intermediates in the formation of I, were also obtained. The preferred IV and V, having the 1-R configuration, are useful intermediates in the manufacture of pyrethrins. E.g., a solution of 40 mmol III in 40 mL $CHCl_3$ at 0-5° was treated by gradual addition of 40 mmol 3-ClC₆H₄C(O)OOH (VI) during 1 h and the temperature of the mixture was allowed to rise to 20° during 4 h to give 100% conversion of I with product selectivities IV 10, V 80, and II 10%, whereas similar treatment of 23.3 mmol III with 93.2 mmol VI gave 85% II (isolated yield).

L4 ANSWER 6 OF 10 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1976:592705 CAPLUS

DN 85:192705

TI Derivatives of 2-oxa-3-azabicyclo[3.1.0]hex-3-ene

IN Zaitseva, L. G.; Berkovich, L. A.; Bolesov, I. G.; Leonova, L. I.; Subbotin, O. A.

PA Moscow State University, USSR

SO U.S.S.R.

From: Otkrytiya, Izobret., Prom. Obraztsy, Tovarnye Znaki 1976, 53(24), 70.

CODEN: URXXAF

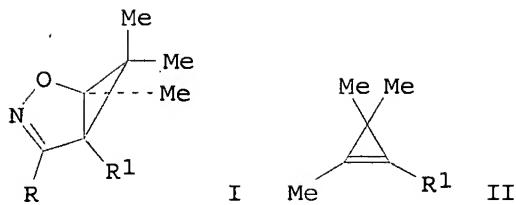
DT Patent

LA Russian

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	SU 519418	A1	19760630	SU 1973-1940466	19730628
PRAI	SU 1973-1940466	A	19730628		

GI



AB Oxaazabicyclohexenes I (R = Me, Ph, or phenyl substituted by Cl, Br, NO₂; R₁ = H, Me, CO₂Me) were prepared by reaction of R₁CCl:NOH with excess II and an equimolar amount Et₃N in ether at -15 to -10°.

L4 ANSWER 7 OF 10 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1971:540336 CAPLUS

DN 75:140336

TI New route to derivatives of bicyclo[2.1.1]hexene and tricyclo[3.1.0.0₂,6]hexane

AU Kirmse, Wolfgang; Scheidt, Friedrich

CS Abt. Chem., Univ. Bochum, Bochum-Querenburg, Fed. Rep. Ger.

SO Angewandte Chemie, International Edition in English (1971), 10(4), 263-4
CODEN: ACIEAY; ISSN: 0570-0833

DT Journal

LA English

GI For diagram(s), see printed CA Issue.

AB exo-6-(N-Nitroso-N-carbamoylamino)bicyclo[3.1.0]hex-2-ene (I) is converted to exo-6-methoxybicyclo[3.1.0]hex-2-ene (II), 4-methoxytricyclo[3.1.0.0₂,6]hexane (III), and anti-bicyclo[2.1.1]-hex-2-en-5-ol (IV) via the cation, exo-6-diazo**i**obicyclo[3.1.0]-hex-2-ene (V). The transition of V to III is a homoallyl-cyclopropylcarbonyl rearrangement and the conversion of II to IV is a homoallyl-homoallyl rearrangement. Thus, I is treated with HCO₂Na in MeOH to give II and III. I is treated with NaHCO₃ in water-dioxane to give IV.

L4 ANSWER 8 OF 10 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1969:87124 CAPLUS

DN 70:87124

TI A new approach towards the synthesis of the bicyclo[2.1.1]hex-2-ene system

AU Masamune, Satoru; Cain, E. N.; Vukov, R.; Takada, S.; Nakatsuka, N.

CS Univ. Alberta, Edmonton, AB, Can.

SO Chemical Communications (London) (1969), (5), 243-4

CODEN: CCOMA8; ISSN: 0009-241X

DT Journal

LA English

OS CASREACT 70:87124

AB The preparation of exo-bicyclo[2.1.1]hex-2-en-5-ol acetate (I) is described. Hydroboration of bicyclo[2.2.0]hex-2-ene-5,6-dicarboxylic acid anhydride at -15°, followed by treatment with alkaline H₂O₂, Ac₂O, and finally boiling water, gave 60-70% 5-acetoxybicyclo[2.2.0]hexane-2,3-dicarboxylic acid (II) m. 182-3.5°. Oxidative decarboxylation of II with Pb(OAc)₄ gave apprx. 40% 5-acetoxybicyclo[2.2.0]hex-2-ene which was converted, via the hydroxy derivative (LiAlH₄), into 5-(p-nitrophenylsulfonyl)bicyclo-[2.2.0]hex-2-ene (III) m. 73-4°.

III was solvolyzed in AcOH containing 2 equivs. AcONa. At 50% completion, the solvolysis was quenched. The product comprised III 50, benzene 5, I 32, an unidentified acetate 11, and minor products 2%. Further solvolysis of III gave a total yield of 50% I. I was unstable under the solvolytic conditions and, after 8 half-lives of III, the major product (>90% yield) was the unidentified acetate, indicating that I was converted to the acetate. The p-nitrobenzenesulfo-nate di-Me ester (m. 115-6°) of II underwent base-catalyzed elimination to give di-Me tricyclo[3.1.0.0₂,6]hexane-1,2-dicarboxylate, which was further transformed into 5-methoxybicyclo[2.1.1]hexane-2,3-dicarboxylic acid, m.

118°.

L4 ANSWER 9 OF 10 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1967:402593 CAPLUS
DN 67:2593
TI The identify of photochemical intermediates in cyclohexadiene valence tautomerizations. Rearrangements to bicyclo[3.1.0]hexanes
AU Ullman, Edwin F.; Henderson, William Arthur, Jr.; Huffman, K. Robert
CS American Cyanamid Co., Stamford, CT, USA
SO Tetrahedron Letters (1967), (10), 935-9
CODEN: TELEAY; ISSN: 0040-4039
DT Journal
LA English
GI For diagram(s), see printed CA Issue.
AB Irradiation of the photochromic compound (I, R = H) (II) in EtOAc with uv light (3100-4000 Å.) gave an unstable red compound (III, R = H) (IV) reaching a stationary state concentration due to rapid thermal return to II. On long irradiation the red color disappears with 84% yield of photochem. inert alc. (V, R = H) (VI), m. 196-8° (decomposition). Similar irradiation of I (R = Ac) (VII) gave 35% stable red III (R = Ac) (VIII), together with 49% colorless acetate V (R = Ac) (IX), m. 217-20° (decomposition). VI acetylated with Ac₂O-H₂SO₄ gave IX. Both VI and IX gave ir absorption typical of an unconjugated chromone nucleus together with unconjugated nitrile absorption at 4.45 μ. The mass spectra showed retention of the PhCOH grouping. VI refluxed in xylene 5 hrs. gave the xanthone (X), m. 337-9°, λ 4.48 μ, also produced from II by treatment with H₂SO₄ in MeCN. To establish the immediate photochem. precursor of V it seemed important to establish if the reaction I → III might involve a transient intermediate capable of giving rise to V. II in 1:1:1 methylcyclohexane-3-methylpentane-toluene glass irradiated (3100-4000 Å.) at 77°K. showed the presence of an intermediate (XI) which thermally rearranges to IV and is photosensitive. XI may be a conformational isomer of IV. The different photochem. behavior of the 2 species may be due to increased bond order of the C:C-C:C single bond in the excited states which effectively freezes the ground state conformation. These observations require not only I and III but also the blue intermediate XI to be considered as possible photochem. precursors of the cyclopropanes V. However, the effective quantum yield for formation of V should depend on the light intensity and since this is contrary to exptl. observation it was concluded that the cyclohexadienes II and VII are photochem. transformed to the cyclopropanes VI and IX without the intermediacy of the hexatrienes IV and VIII.

L4 ANSWER 10 OF 10 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1911:19345 CAPLUS
DN 5:19345
OREF 5:3280e-i,3281a-i,3282a-b
TI Terpenes and Ethereal Oils. CVI. Bicyclic Compounds from Cyclohexanone
AU Wallach, O.
CS Chem. Inst., Univ. Gottingen
SO Ann. (1911), 381, 95-113
DT Journal
LA Unavailable
GI For diagram(s), see printed CA Issue.
AB The mol. reference of cyclohexenehexanone (52.81) is not what would be expected if its formula were (I) below. In b. alc., Na reduces it to cyclohexenehexanol, C₁₂H₂₀O; m. 34-5°; b. 272-3°; d₃₇ 0.974; nD₃₇ 1.5007; d₁₉ 0.989; nD₁₉ 1.5071. It is also formed from Na and cyclohexanone, in toluene, at 100°. Phenylurethan, crystals from MeOH, m. 118-9°. With CrO₃ + H₂SO₄ the alc. regenerates (I), but in C₆H₆ at 0°, KMnO₄ (2%) oxidizes it to a trihydroxy alcohol, C₁₂H₁₉(OH)₃; crystalline b₁₀ 202-5°. It could not be purified completely. A ketonic acid (III) is formed, together with the preceding alc.; it is the chief product of the reaction and is extracted from the mixture of K salts by means of Et₂O + H₂SO₄. Yellow needles from C₆H₆, m.

74-5°; b14 205-15°. It may be sublimed. Silver salt. Semicarbazone, crystals from MeOH, m. 190-200°. Chlorohydrate, C12H19O3Cl, from (III) and dry HCl, in glacial AcOH, at the ordinary temperature; white plates from ligroin, m. 48-51°. It reacts with difficulty with "hypobromite" and therefore does not contain Ac. Hitherto it has not been possible to obtain (III) directly from (I) and "permanganate." Cyclohexenehexanoneoxime, m. 146-51°. It is reduced to bicyclohexenehexylamine, C12H21N; solid, m. 33-5°. It volatilizes only slowly with steam. Hydrochloride, C21H21N.HCl, from dry HCl, in Et2O; white crystals. "Permanganate" oxidizes the amine to (III). In view of these facts it is impossible to decide between (I) and (II) as the formula for cyclohexenehexanone, but, on the whole, the evidence appears to favor (I), otherwise we are led to the assumption of the existence of a secondary alc. which eliminates H2O very readily, although it cannot be oxidized to a ketone. In MeOH, (I) is reduced easily by Pd and H to cyclohexylhexanone (IV) (see preceding abstract); liquid, b12 137°; d18 0.978; nD18 1.4887. Semicarbazone, m. 203°. Oxime, m. 100°. Benzylidene derivative, C19H24O, lustrous plates from alc., m. 100°. Na reduces (IV) to cyclohexylhexanol (V), which is also formed from Pd, H and cyclohexenehexanone (see above); solid, b. 264°; m. 42°. Phenylurethan, m. 117°. At 190°, ZnCl2 converts (V) into cyclohexylhexene (VI); liquid, b. 237°; d20 0.9010; nD20 1.4910; mol. reference 52.72. Yield, good. Nitrosochloride, crystals from alc., m. 140°. In glacial AcOH, CrO3 oxidizes (IV) to an acid (VII), which is also formed from (III), Pd and H, in dilute alkaline solution; crystals from ligroin + Et2O, m. 58°. It may be distilled under reduced pressure. Semicarbazone, needles from MeOH, m. 172-3°. It is utilized for the purification of (VII). Oxime, slender needles, m. 105°. Methyl ester, from the acid, MeOH and dry HCl, at the ordinary temperature; liquid, b13 173°; d18 1.0175; nD18 1.4659. Yield, almost quant. No ketone could be obtained from (VII) and soda-lime; it is not oxidized by CrO3, nor does it react with HCl, at 190°, nor with dilute H2SO4, at 160°. In dry toluene, Na and the Me ester, at 120-30°, give 1-hexahydrobenzoyl-2-cyclopentanone probably (VIII), which was purified by means of its Cu salt; colorless oil, b11 150°. It dissolves in aqueous NaOH (10%) and gives a violet color with FeCl3, in dilute alc. Yield, 50% of (VII). Copper salt, grayish green and pulverulent. No semicarbazone or oxime could be obtained from (VIII); with b. aqueous NaOH it regenerates (VII). Methyl derivative, probably (IX) is obtained by the interaction at 100°, of MeI and the Na compound, which is prepared from (VIII), Na and toluene, at 130°; liquid, b13 150°. It does not dissolve in aqueous NaOH, gives no color with FeCl3 and does not form a Cu salt. Semicarbazone, C14H23O2N3, crystals from MeOH, m. 203°. In alc., Na reduces (VII) to a hydroxy acid, C12H22O3; viscous liquid. When distilled it passes into the lactone, C12H20O2; crystals, m. 45°; b12 about 175°. With H2SO4 (1 : 1.5) this lactone gives an unsaturated acid, C12H20O2; liquid, b20, 182-6°. Silver salt. At 230°, aqueous KOH converts (VII) into a mixture of acids, the chief constituent being an unsaturated acid which volatilizes with difficulty, m. 172°. In moist Et2O, Na reduces cyclohexanone to a mixture of cyclohexanol and cyclohexanonepinacol (cyclohexanonepinacone; 1,1'-bicyclohexylidol) (X). After b. during 2 hrs. with dilute H2SO4, it is converted into Δ 1,1'-bi-cyclohexene (XI); liquid, b. 250-3°; b15, 110-5°; d20 0.9485; nD20 1.5287; mol. reference 52.65; this is greater by 0.31 than the calculated value, the difference being due to the proximity of the 2 ethylene linkages. In glacial AcOH, (XI) and HBr form a dibromohydrate, C12H20Br2; white needles from MeOH, m. 68-9°. Cyclohexanol, C6H11OH, forms a stable compound with CaCl2. Its production may be utilized to purify the alc. and also to separate any of it which may be present in com. cyclohexanone. 1,3-Dimethylcyclohexene is prepared in a similar manner to (XI), from 1,3-methylcyclohexanone; liquid, b. 265-7°.

=> d his

(FILE 'HOME' ENTERED AT 14:55:03 ON 05 JAN 2007)

FILE 'CAPLUS, BEILSTEIN' ENTERED AT 14:55:16 ON 05 JAN 2007
L1 1 S DIHYDROXYPHENYL BICYCLOHEXENE
L2 294 S BICYCLOHEXENE
L3 1470773 S HYDROXY
L4 10 S L2 AND L3

=> s 12
L5 294 L2

=> d scan

L5 294 ANSWERS CAPLUS COPYRIGHT 2007 ACS on STN
CC 24-7 (Alicyclic Compounds)
Section cross-reference(s): 22
TI 6-Deuterio-1,2,3,5-tetramethyl-4-methylene-endo- and -exo-6-
(trideuteriomethyl)bicyclo[3.1.0]hex-2-ene. Mechanism of singlet excited
photoisomerization of the homofulvene system
ST methylmethylenecyclohexene deuterio deriv prepn photoisomerization;
bicyclohexene deuteriomethylmethylen prepn photoisomerization;
isomerization photo deuteriomethylmethylenecyclohexene
IT Isomerization
(photochem., of deuteriotetramethyl(methylene)(trideuteriomethyl) by
cyclohexene isomers)
IT 670-54-2, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(cycloaddn. reaction of, with methylcyclohexadiene derivative)
IT 15971-76-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(deuteration of)
IT 99412-00-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and cycloaddn. reaction with tetracyanoethylene)
IT 99411-97-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(preparation and deuteriohydride reduction of)
IT 99411-99-1P 99438-78-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and photoisomerization of)
IT 99411-98-0P 99412-01-8P 99412-02-9P 99412-03-0P 99412-04-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
IT 4045-44-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(trideuteroacetylation of)

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L5 294 ANSWERS CAPLUS COPYRIGHT 2007 ACS on STN
CC 24-7 (Alicyclic Compounds)
Section cross-reference(s): 75
TI A revised structure of bicyclo[2.1.1]hex-2-ene by gas phase electron
diffraction
ST bicyclohexene electron diffraction structure
IT Molecular structure
(of bicyclohexene)
IT 822-41-3
RL: PRP (Properties)
(structure of, electron diffraction study of)

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L5 294 ANSWERS CAPLUS COPYRIGHT 2007 ACS on STN
CC 24-8 (Alicyclic Compounds)
Section cross-reference(s): 25
TI Rearrangements in the cycloaddition of tetracyanoethylene to
3-methylene-1,4-cyclohexadienes and homofulvenes
ST cycloaddn cyanomethylene methylenecyclohexadiene; homofulvene
cyanomethylene cycloaddn; bicyclohexene cyanomethylene cycloaddn
IT Solvent effect
(in cycloaddition of methylcyclohexadienes and homofulvenes with
tetracyanoethylene)
IT Stereochemistry
(of cycloaddition of methylenecyclohexadienes and homofulvenes with
tetracyanoethylene)
IT Cycloaddition reaction
(of methylenecyclohexadienes and homofulvenes with tetracyanoethylene,
mechanism of)
IT 670-54-2, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(cycloaddition of, with methylenecyclohexadiene and homofulvenes)
IT 18636-59-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(cycloaddition of, with tetracyanoethylene)
IT 29304-70-9 39600-06-1 39600-07-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(cycloaddition reaction of, with tetracyanoethylene)
IT 18636-59-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(photochem. rearrangement of)
IT 29444-92-6P 29897-87-8P 39600-11-8P 39600-12-9P 39600-13-0P
39600-15-2P 39600-16-3P 39600-17-4P 39600-18-5P 39600-19-6P
39600-20-9P 39600-21-0P 39600-22-1P 39600-25-4P 39600-26-5P
39600-27-6P 39600-28-7P 39745-83-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
IT 1071-98-3 1972-28-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with methylenediphenylcyclohexadiene)
IT 39600-08-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(ring cleavage of)

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L5 294 ANSWERS CAPLUS COPYRIGHT 2007 ACS on STN
CC 22 (Physical Organic Chemistry)
TI Bicyclo[2.1.1]hex-2-ene. Electrophilic addition reactions
ST oxymercuration bicyclohexenes; bicyclohexenes
oxymercuration
IT Stereochemistry
(of addition reactions, of bicyclohexene)
IT Addition reactions
(of bicyclo hexene, mechanism of)
IT 822-41-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(addition reaction of, mechanism of)
IT 64-19-7, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(addition reaction of, with bicyclo hexene)
IT 528-76-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(addition reaction of, with bicyclo hexene, mechanism of)
IT 7647-01-0, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)

(addition reaction of, with bicyclohexene)
IT 21932-30-9P 21932-31-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L5 294 ANSWERS CAPLUS COPYRIGHT 2007 ACS on STN
CC 22-6 (Physical Organic Chemistry)
TI Thermal rearrangements of bicyclic gem-dihalocyclopropanes: the aromatization of 6,6-difluorobicyclo[3.1.0]hex-2-ene and 6,6-dihalo-2,3-benzobicyclo[3.1.0]hex-2-ene derivatives
ST aromatization difluorobicyclohexene dihalobenzobicyclohexene rearrangement; benzobicyclohexene dihalo aromatization kinetics; bicyclohexene difluoro aromatization kinetics
IT Kinetics of aromatization
Kinetics of rearrangement
(of difluorobicyclohexene and dihalobenzobicyclohexenes)
IT 15677-15-3D, dihalo derivs. 54264-99-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(aromatization of, kinetics of)

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):d

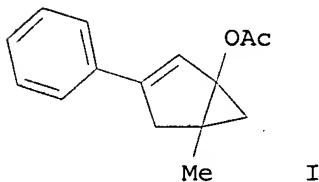
'D' IS NOT VALID HERE

To display more answers, enter the number of answers you would like to see. To end the display, enter "NONE", "N", "0", or "END".

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):0

=> d bib abs hitstr 1-10

L5 ANSWER 1 OF 294 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2006:937676 CAPLUS
DN 145:471178
TI Gold(I) Catalyzed Isomerization of 5-en-2-yn-1-yl Acetates: An Efficient Access to Acetoxy Bicyclo[3.1.0]hexenes and 2-Cycloalken-1-ones
AU Buzas, Andrea; Gagosz, Fabien
CS Laboratoire de Synthese Organique, UMR 7652, CNRS/Ecole Polytechnique, Palaiseau, 91128, Fr.
SO Journal of the American Chemical Society (2006), 128(39), 12614-12615
CODEN: JACSAT; ISSN: 0002-7863
PB American Chemical Society
DT Journal
LA English
GI



AB The gold(I) catalyzed rearrangement of 5-en-2-yn-1-yl acetates into functionalized acetoxybicyclo[3.1.0]hexenes is described. The mild reaction conditions employed allow the efficient and rapid synthesis of a variety of such bicyclic compds. via a sequence of two gold(I)-catalyzed isomerization steps. E.g., gold(I) catalyzed cycloisomerization of PhCH(OAc)C.tplbond.CCH2CMe:CH2 gave 97% acetoxybicyclo[3.1.0]hexene I. Acetoxybicyclo[3.1.0]hexenes products can be further transformed to 2-cycloalkenones by simple methanolysis.

RE.CNT 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

LS ANSWER 2 OF 294 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2005:1288331 CAPLUS
DN 144:232601
TI Dynamics of the Degenerate Rearrangement of Bicyclo[3.1.0]hex-2-ene
AU Doubleday, Charles; Suhrada, Christopher P.; Houk, K. N.
CS Department of Chemistry, Columbia University, New York, NY, 10027, USA
SO Journal of the American Chemical Society (2006), 128(1), 90-94
CODEN: JACSAT; ISSN: 0002-7863
PB American Chemical Society
DT Journal
LA English
AB Quasiclassical direct dynamics simulations are applied to a 4-fold degenerate rearrangement which yields a nonstatistical product distribution. The simulated product ratio agrees with experiment and is found to be entirely dynamically determined. Trajectory lifetimes are on the order of a low-frequency vibrational period. The interaction of reaction momentum with the geometric features of the potential surface produces selectivity despite a common energy barrier. A geometric model is described for qual. estimating much of the dynamically determined product ratio independently of trajectory calcns. The characteristics of this reaction are expected also to apply to others involving modestly stabilized diradical intermediates.

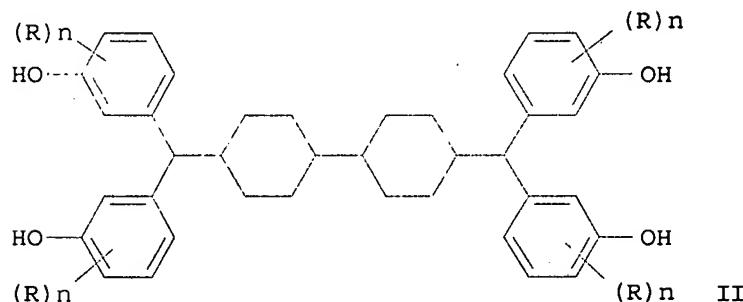
RE.CNT 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

LS ANSWER 3 OF 294 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2005:1003166 CAPLUS
DN 143:286821
TI Liquid crystalline 4,4-dihydroxy-p-quarterphenyls and their manufacture
IN Satomi, Akifumi; Egawa, Kenji; Ono, Hiroyasu
PA Honshu Chemical Industry Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 15 pp.
CODEN: JKXXAF

DT Patent
LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2005247809	A	20050915	JP 2004-64056	20040308
PRAI	JP 2004-64056		20040308		
OS	MARPAT 143:286821				
GI					



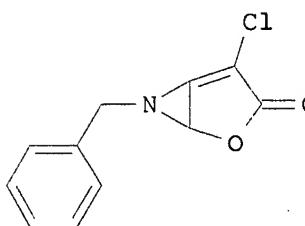
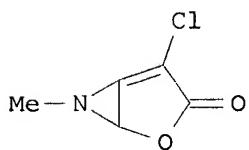
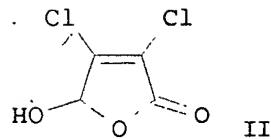
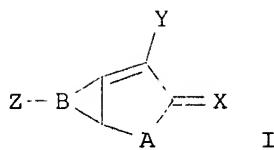
AB P-HOC6H4-nRn-p-C6H4-p-C6H4C6H4-nRnOH-p (I; R = C1-3 alkyl; n = 1-3), useful for liquid crystal displays, photoresists, polyesters, polycarbonates, etc. (no data), are manufactured by thermal decomposition of bicyclohexanes II (R, n = same as I) in solvents and dehydrogenation of the resulting 4,4'-di(hydroxyphenyl)bicyclohexenes in solvents

in the presence of catalysts. Thus, 4,4'-di(3-methyl-4-hydroxyphenyl) bicyclohexene-3 was dehydrogenated in the presence of Pd/C and α -methylstyrene in tetraethylene glycol at .apprx.160° for 6 h to give 71.1% I (Rn = 3-Me).

LS ANSWER 4 OF 294 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2004:902917 CAPLUS
DN 142:55799
TI Novel Cyclooctatetraene Radical Cation Planarized by Full Annelation with Bicyclo[2.1.1]hexene Units
AU Nishinaga, Tohru; Uto, Takayuki; Komatsu, Koichi
CS Institute for Chemical Research, Kyoto University, Kyoto, 611-0011, Japan
SO Organic Letters (2004), 6(24), 4611-4613
CODEN: ORLEF7; ISSN: 1523-7060
PB American Chemical Society
DT Journal
LA English
OS CASREACT 142:55799
AB A novel cyclooctatetraene (COT) radical cation fully annelated with bicyclo[2.1.1]hexene units was prepared as SbCl₆- salt, and planarity of the octagonal ring was clarified by ESR and theor. calcns. Its longest wavelength absorption (630 nm) is blue-shifted from that (745 nm) of COT radical cation annelated with bicyclo[2.2.2]octene units due to the widening of the HOMO-SOMO gap accompanying the flattening of the COT ring.
RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

LS ANSWER 5 OF 294 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2004:718545 CAPLUS
DN 141:243540
TI Condensed bicyclo[3.1.0]hex-4-ene derivatives, including 2-oxa-6-azabicyclo[3.1.0]hex-4-en-3-ones, useful as a new class of antibacterial agents, their preparation from mucohalogen acids, their bactericidal compositions, and methods of use
IN Lattmann, Eric; Fernandez, Isidro Merino
PA Aston University, UK
SO PCT Int. Appl., 24 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004074293	A1	20040902	WO 2004-GB483	20040209
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	EP 1608658	A1	20051228	EP 2004-709268	20040209
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
PRAI	GB 2003-3874	A	20030220		
	WO 2004-GB483	W	20040209		
QS	CASREACT 141:243540; MARPAT 141:243540				
GI					



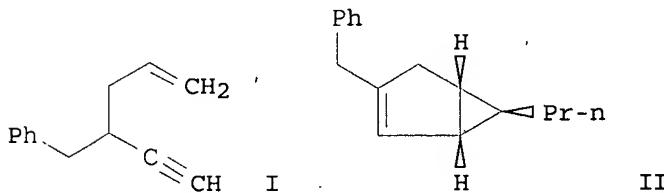
AB The invention provides novel compds. I [wherein: A = C, S, O, or N; B = C or N; X = O or S; Y = H, halo, (un)substituted heterocyclic moiety, (un)substituted, linear or branched alkyl, alkoxy, alkylcarbonyl, alkoxycarbonyl, alkenyl, alkenyloxy, alkenylcarbonyl, alkenyloxycarbonyl, alkynyl, alkynyloxy, alkynylcarbonyl, alkynyloxycarbonyl, aryl, PhCH₂, aryloxy, arylcarbonyl, aryloxycarbonyl, and S equivs. of said oxy, carbonyl, and oxycarbonyl moieties; Z = H, halo, (un)substituted heterocyclic moiety, (un)substituted, linear or branched alkyl, alkylcarbonyl, alkoxy carbonyl, alkenyl, alkenylcarbonyl, alkenyloxycarbonyl, alkynyl, alkynylcarbonyl, alkynyloxycarbonyl, aryl, PhCH₂, arylcarbonyl, aryloxycarbonyl, and S equivs. of said carbonyl and oxycarbonyl moieties; excluding the compound where A and X = O, B = N, Y = Cl and Z = Me; including physiol. acceptable salts]. The invention also relates to the use of the compds. (including the specifically excluded compound above) to prevent or ameliorate bacterial infections. This novel compound class is previously known only from a byproduct in a synthesis of furanone anticancer agents. Four particularly preferred compds. are specifically claimed. Claimed uses include treatment of infection by *Acinetobacter* spp., *Escherichia coli*, *Enterobacter* spp., *Klebsiella pneumoniae*, *Pseudomonas aeruginosa*, and *Staphylococcus aureus*. Examples of possible uses in animal health include medicaments used in the production of shrimps or prawns in tanks, as well as the mass production of chickens. Compds. I generally exhibit broad spectrum antibacterial activity. In some cases, I show greater activity against antibiotic-resistant strains than against non-resistant equivalent strains, indicating that I may be a new class of antibacterials acting by a new biol. mechanism or a novel mode of action. Four synthetic examples are given. The methodol. involves either cyclization of mucohalogen acids with N-substituted formamides, or N-alkylation of I in the case where B = N and Z = H. For instance, mucochloric acid (II; shown as lactone tautomer) and N-methylformamide reacted in refluxing PhMe in the presence of 1% concentrated H₂SO₄ to give

title

compound III (the per se excluded compound) in 65% yield. III had MIC/MBC values (both μ g/mL) of 64/128 against *Staphylococcus aureus* S3 (patient isolate), but was more potent (16/64) against the resistant strain *S. aureus* ATCC 25923. Invention compound IV showed broad spectrum activity against *Acinetobacter* (4-8/8-16), *E. coli* (16/16), *Enterobacter* (8-16/16-32), and resistant strains of *E. coli* (8/16), *P. aeruginosa* (16/32), and *S. aureus* (4/8). No acute toxicity was observed in mice up to a dose of 500 mg/kg. An ointment and a nasal spray formulation are described.

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

AN 2004:650351 CAPLUS
 DN 141:331822
 TI Catalytic Isomerization of 1,5-Enynes to Bicyclo[3.1.0]hexenes
 AU Luzung, Michael R.; Markham, Jordan P.; Toste, F. Dean
 CS Center for New Directions in Organic Synthesis, Department of Chemistry,
 University of California-Berkeley, Berkeley, CA, 94720, USA
 SO Journal of the American Chemical Society (2004), 126(35), 10858-10859
 CODEN: JACSAT; ISSN: 0002-7863
 PB American Chemical Society
 DT Journal
 LA English
 OS CASREACT 141:331822
 GI



AB The cycloisomerization of 1,5-enynes such as I in the presence of cationic triphenylphosphinegold(I) complexes produces bicyclo[3.1.0]hexenes regioselectively and stereoselectively. Substitution at all positions of the 1,5-ynene is tolerated, leading to a wide range of bicyclo[3.1.0]hexane structures, including those containing quaternary carbons. Substrates containing 1,2-disubstituted olefins undergo stereospecific cycloisomerization; thus a cis-olefin produces cis-cyclopropane, and a trans-olefin gives a trans-cyclopropane. Enantioenriched bicyclo[3.1.0]hexenes can be obtained from the gold(I)-catalyzed cycloisomerization of enantioenriched 1,5-enynes with excellent chirality transfer. The preparation of tricyclic systems is accomplished through a gold(I)-catalyzed tandem cycloisomerization-ring enlargement reaction of substrates such as 1-(trans-cinnamyl)-1-(ethynyl)cyclopentane. For example, cycloisomerization of (E)-HC.tpbond.CCH(CH₂Ph)CH₂CH:CHCH₂Et in the presence of 1 mol% (triphenylphosphine)gold(I) hexafluoroantimonate yields II in 98% yield and >98% de.

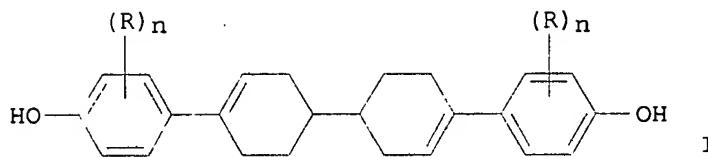
RE.CNT 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 7 OF 294 CAPLUS COPYRIGHT 2007 ACS on STN
 AN 2004:354897 CAPLUS
 DN 140:357058
 TI Preparation of novel 4,4'-bis(hydroxyphenyl)bicyclohexene and its derivatives
 IN Satomi, Kouji; Oono, Hiroyasu; Ekawa, Kenji
 PA Honshu Chemical Industry Co., Ltd., Japan
 SO PCT Int. Appl., 20 pp.
 CODEN: PIXXD2

DT Patent
 LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004035513 W: JP, US US 2006129001	A1	20040429	WO 2003-JP13222	20031016
PRAI	JP 2002-302887 WO 2003-JP13222	A	20021017 20031016	US 2005-531358	20050929
OS	CASREACT 140:357058; MARPAT 140:357058				



AB Novel 4,4'-bis(hydroxyphenyl)bicyclohexenes (I; R = C1-4 alkyl; n = an integer of 0-3) are produced by thermally decomposing 4,4,4',4'-tetrakis(hydroxyphenyl)bicyclohexanes preferably in the presence of an alkaline catalyst. The 4,4'-dihydroxyphenyl-bicyclohexenes are useful as synthetic resin materials for liquid crystal polyester, polycarbonate, polyurethane and the like, or materials for photoresists of display devices, semiconductors and the like. Thus, phenol was condensed with 4,4'-bicyclohexanone in the presence of dry HCl, dodecyl mercaptan, and methanol at 40° for 20 h to give 89.6% 4,4,4',4'-tetrakis(4-hydroxyphenyl)-1,1'-bicyclohexane which was heated in tetraethylene glycol in the presence of NaOH under reduced pressure (3.0 kpa) with removal of water at 203° for 3 h followed by neutralization with acetic acid to pH 6.0 to give 73.4% 4,4,4',4'-tetrakis(4-hydroxyphenyl)-1,1'-bicyclohex-3-ene.

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 8 OF 294 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2003:827752 CAPLUS
DN 140:59344
TI Development of novel Lewis acid catalyzed cycloisomerizations: synthesis of bicyclo[3.1.0]hexenes and cyclopentenones
AU Miller, Aubry K.; Banghart, Matthew R.; Beaudry, Christopher M.; Suh, Judy M.; Trauner, Dirk
CS Center for New Directions in Organic Synthesis, Department of Chemistry, University of California, Berkeley, CA, 94720, USA
SO Tetrahedron (2003), 59(45), 8919-8930
CODEN: TETRAB; ISSN: 0040-4020
PB Elsevier Science B.V.
DT Journal
LA English
OS CASREACT 140:59344
AB The Lewis acid catalyzed cyclization of hexatrienes and pentadienals to bicyclo[3.1.0]hexenes and cyclopentenones, resp., was investigated. The application of the former reaction to the total synthesis of (\pm)-photodeoxytridachione, a molluscan polypropionate, [i.e., rel-2-methoxy-3,5-dimethyl-6-[(1S,4S,5R,6S)-1,3,6-trimethyl-4-[(1E)-1-methyl-1-butenyl]bicyclo[3.1.0]hex-2-en-6-yl]-4H-pyran-4-one] is described. Reaction of rel-1-[(1R,4R,5S,6R)-1,3,6-Trimethyl-4-[(1E)-1-methyl-1-butenyl]bicyclo[3.1.0]hex-2-en-6-yl]-1-propanone with gave (1R,4R,5S,6R)-rel- α , γ ,1,3,6-pentamethyl-4-[(1E)-1-methyl-1-butenyl]- β , δ -dioxobicyclo[3.1.0]hex-2-ene-6-pentanoic acid Me ester. Intramol. cyclization of the latter gave rel-4-hydroxy-3,5-dimethyl-6-[(1R,4R,5S,6R)-1,3,6-trimethyl-4-[(1E)-1-methyl-1-butenyl]bicyclo[3.1.0]hex-2-en-6-yl]-2H-pyran-2-one which was a precursor for (\pm)-photodeoxytridachion.

RE.CNT 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 9 OF 294 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2003:714228 CAPLUS
DN 140:199501
TI Recent Advances in the Synthesis of Conformationally Locked Nucleosides

and Their Success in Probing the Critical Question of Conformational Preferences by Their Biological Targets

AU Choi, Yongseok; Moon, Hyung R.; Yoshimura, Yuichi; Marquez, Victor E.
CS Center for Cancer Research, Laboratory of Medicinal Chemistry, National

Cancer Institute at Frederick, NIH, HHS, Frederick, MD, 21702, USA
SO Nucleosides, Nucleotides & Nucleic Acids (2003), 22(5-8), 547-557

CODEN: NNNAFY; ISSN: 1525-7770

PB Marcel Dekker, Inc.

DT Journal; General Review

LA English

AB A review with refs. The present work describes some recent approaches to the syntheses of three classes of locked-North nucleosides: β -D-ribo-, β -D-deoxyribo-, and β -D-dideoxyribonucleosides.

The method developed for the latter class permitted access to a novel bicyclo[3.1.0]hexene-type nucleosides structurally similar to D4T and carbovir. A structural anal. and biol. activities are discussed.

RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 10 OF 294 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2003:246880 CAPLUS

DN 139:68964

TI Desymmetrization of cyclopentadienyilsilane by asymmetric cyclopropanation

AU Allais, Florent; Angelaud, Remy; Camuzat-Dedenis, Boris; Julienne, Karine; Landais, Yannick

CS University Bordeaux-I, Laboratoire de Chimie Organique et Organometallique, Talence, 33405, Fr.

SO European Journal of Organic Chemistry (2003), (6), 1069-1073
CODEN: EJOCFK; ISSN: 1434-193X

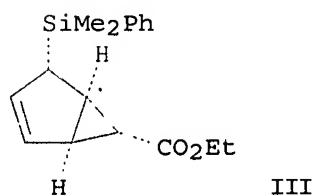
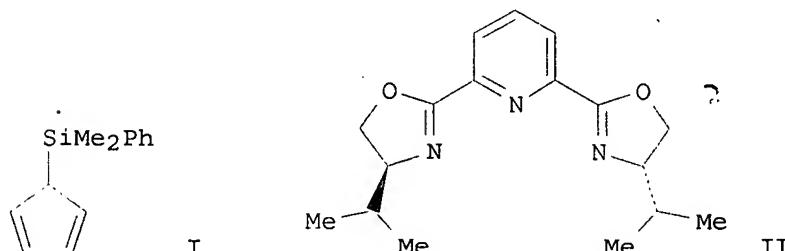
PB Wiley-VCH Verlag GmbH & Co. KGaA

DT Journal

LA English

OS CASREACT 139:68964

GI



AB Desymmetrization of silylcyclopenta-2,4-diene I was carried out by an asym. copper(I)-mediated cyclopropanation. An in-depth investigation with various ligands led to the discovery that PyBox ligands, e.g., II, were the most efficient ligands for this transformation and led to the

cyclopropane III with an ee of up to 72%. Further studies aimed at providing insights into the origin of this enantiocontrol are also provided.

RE.CNT 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d his

(FILE 'HOME' ENTERED AT 14:55:03 ON 05 JAN 2007)

FILE 'CAPLUS, BEILSTEIN' ENTERED AT 14:55:16 ON 05 JAN 2007
L1 1 S DIHYDROXYPHENYL BICYCLOHEXENE
L2 294 S BICYCLOHEXENE
L3 1470773 S HYDROXY
L4 10 S L2 AND L3
L5 294 S L2

=>

---Logging off of STN---

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Executing the logoff script...

=> LOG . Y

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	76.13	76.34
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-17.16	-17.16

STN INTERNATIONAL LOGOFF AT 15:00:16 ON 05 JAN 2007

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSPTAEXB1618

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

NEWS 1 Web Page URLs for STN Seminar Schedule - N. America
NEWS 2 "Ask CAS" for self-help around the clock
NEWS 3 AUG 09 INSPEC enhanced with 1898-1968 archive
NEWS 4 AUG 28 ADISCTI Reloaded and Enhanced
NEWS 5 AUG 30 CA(SM)/CAplus(SM) Austrian patent law changes
NEWS 6 SEP 21 CA/CAplus fields enhanced with simultaneous left and right truncation
NEWS 7 SEP 25 CA(SM)/CAplus(SM) display of CA Lexicon enhanced

NEWS 8 SEP 25 CAS REGISTRY(SM) no longer includes Concord 3D coordinates
NEWS 9 SEP 25 CAS REGISTRY(SM) updated with amino acid codes for pyrrolysine
NEWS 10 SEP 28 CEABA-VTB classification code fields reloaded with new
classification scheme
NEWS 11 OCT 19 LOGOFF HOLD duration extended to 120 minutes
NEWS 12 OCT 19 E-mail format enhanced
NEWS 13 OCT 23 Option to turn off MARPAT highlighting enhancements available
NEWS 14 OCT 23 CAS Registry Number crossover limit increased to 300,000 in
multiple databases
NEWS 15 OCT 23 The Derwent World Patents Index suite of databases on STN
has been enhanced and reloaded
NEWS 16 OCT 30 CHEMLIST enhanced with new search and display field
NEWS 17 NOV 03 JAPIO enhanced with IPC 8 features and functionality
NEWS 18 NOV 10 CA/CAplus F-Term thesaurus enhanced
NEWS 19 NOV 10 STN Express with Discover! free maintenance release Version
8.01c now available
NEWS 20 NOV 20 CAS Registry Number crossover limit increased to 300,000 in
additional databases
NEWS 21 NOV 20 CA/CAplus to MARPAT accession number crossover limit increased
to 50,000
NEWS 22 DEC 01 CAS REGISTRY updated with new ambiguity codes
NEWS 23 DEC 11 CAS REGISTRY chemical nomenclature enhanced
NEWS 24 DEC 14 WPIDS/WPINDEX/WPIX manual codes updated
NEWS 25 DEC 14 GBFULL and FRFULL enhanced with IPC 8 features and
functionality
NEWS 26 DEC 18 CA/CAplus pre-1967 chemical substance index entries enhanced
with preparation role
NEWS 27 DEC 18 CA/CAplus patent kind codes updated
NEWS 28 DEC 18 MARPAT to CA/CAplus accession number crossover limit increased
to 50,000
NEWS 29 DEC 18 MEDLINE updated in preparation for 2007 reload
NEWS 30 DEC 27 CA/CAplus enhanced with more pre-1907 records

NEWS EXPRESS NOVEMBER 10 CURRENT WINDOWS VERSION IS V8.01c, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 25 SEPTEMBER 2006.

NEWS HOURS	STN Operating Hours Plus Help Desk Availability
NEWS LOGIN	Welcome Banner and News Items
NEWS IPC8	For general information regarding STN implementation of IPC 8
NEWS X25	X.25 communication option no longer available

Enter NEWS followed by the item number or name to see news on that specific topic.

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FILE 'HOME' ENTERED AT 15:27:18 ON 05 JAN 2007

=> file reg
COST IN U.S. DOLLARS
SINCE FILE
ENTRY
TOTAL
SESSION
0.21
0.21
FULL ESTIMATED COST

FILE 'REGISTRY' ENTERED AT 15:27:35 ON 05 JAN 2007
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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STRUCTURE FILE UPDATES: 4 JAN 2007 HIGHEST RN 916790-89-1
DICTIONARY FILE UPDATES: 4 JAN 2007 HIGHEST RN 916790-89-1

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REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

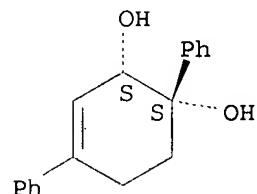
<http://www.cas.org/ONLINE/UG/regprops.html>

=> S 202266-25-9/RN
L1 1 202266-25-9/RN

=> DIS L1 1 SAM

L1 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2007 ACS on STN
IN 3-Cyclohexene-1,2-diol, 1,4-diphenyl-, (1S-cis)- (9CI)
MF C18 H18 O2

Absolute stereochemistry. Rotation (-).

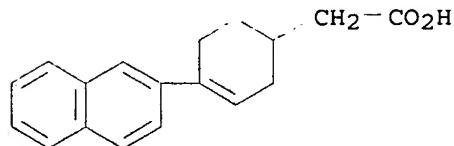


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

=> S 101789-46-2/RN
L2 1 101789-46-2/RN

=> DIS L2 1 SAM

L2 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2007 ACS on STN
IN 3-Cyclohexene-1-acetic acid, 4-(2-naphthyl)- (6CI)
MF C18 H18 O2



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

=> d his

(FILE 'HOME' ENTERED AT 15:27:18 ON 05 JAN 2007)

FILE 'REGISTRY' ENTERED AT 15:27:35 ON 05 JAN 2007

L1 1 S 202266-25-9/RN
L2 1 S 101789-46-2/RN

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---Logging off of STN---

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Executing the logoff script...

=> LOG Y

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	3.74	3.95

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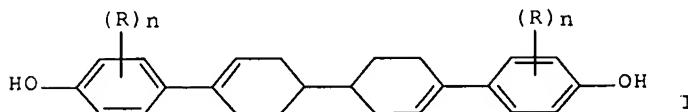
10531358

INVENTOR SEARCH

=> d ibib abs hitstr 16 1-1

L6 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2004:354897 HCAPLUS Full-text
 DOCUMENT NUMBER: 140:357058
 TITLE: Preparation of novel 4,4'-
 bis(hydroxyphenyl)bicyclohexene and its derivatives
 INVENTOR(S): Satomi, Kouji; Oono, Hiroyasu;
 Ekawa, Kenji
 PATENT ASSIGNEE(S): Honshu Chemical Industry Co., Ltd., Japan
 SOURCE: PCT Int. Appl., 20 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004035513 W: JP, US US 2006129001	A1	20040429	WO 2003-JP13222	20031016
PRIORITY APPLN. INFO.:			US 2005-531358 JP 2002-302887 WO 2003-JP13222	20050929 A 20021017 W 20031016
OTHER SOURCE(S): GI			CASREACT 140:357058; MARPAT 140:357058	



AB Novel 4,4'-bis(hydroxyphenyl)bicyclohexenes (I; R = C1-4 alkyl; n = an integer of 0-3) are produced by thermally decomposing 4,4,4',4'-tetrakis(hydroxyphenyl)bicyclohexanes preferably in the presence of an alkaline catalyst. The 4,4'-dihydroxyphenyl-bicyclohexenes are useful as synthetic resin materials for liquid crystal polyester, polycarbonate, polyurethane and the like, or materials for photoresists of display devices, semiconductors and the like. Thus, phenol was condensed with 4,4'-bicyclohexanone in the presence of dry HCl, dodecyl mercaptan, and methanol at 40° for 20 h to give 89.6% 4,4,4',4'-tetrakis(4-hydroxyphenyl)-1,1'-bicyclohexane which was heated in tetraethylene glycol in the presence of NaOH under reduced pressure (3.0 kpa) with removal of water at 203° for 3 h followed by neutralization with acetic acid to pH 6.0 to give 73.4% 4,4,4',4'-tetrakis(4-hydroxyphenyl)-1,1'-bicyclohex-3-ene.

IT 1310-73-2, Sodium hydroxide, uses

RL: CAT (Catalyst use); USES (Uses)

(preparation of 4,4'-bis(hydroxyphenyl)bicyclohexene by thermal decomposition of

4,4,4',4'-tetrakis(hydroxyphenyl)bicyclohexane in presence of alkaline catalyst)

RN 1310-73-2 HCPLUS

CN Sodium hydroxide (Na(OH)) (9CI) (CA INDEX NAME)

Na—OH

IT 256345-92-3P, 4,4,4',4'-Tetrakis(4-hydroxyphenyl)-1,1'-bicyclohexane 256345-93-4P, 4,4,4',4'-Tetrakis(3-methyl-4-hydroxyphenyl)-1,1'-bicyclohexane 256345-96-7P, 4,4,4',4'-Tetrakis(3,5-dimethyl-4-hydroxyphenyl)-1,1'-bicyclohexane 682759-50-8P, 4,4,4',4'-Tetrakis(3-isopropyl-4-hydroxyphenyl)-1,1'-bicyclohexane 682759-51-9P, 4,4'-Bis(3-isopropyl-4-hydroxyphenyl)-1,1'-bicyclohex-3-ene

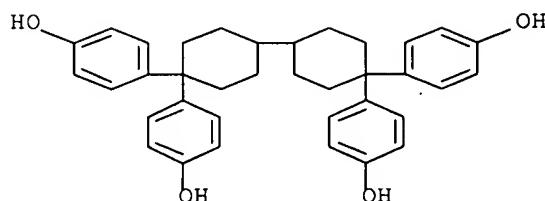
RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of 4,4'-bis(hydroxyphenyl)bicyclohexene by thermal decomposition of

4,4,4',4'-tetrakis(hydroxyphenyl)bicyclohexane in presence of alkaline catalyst)

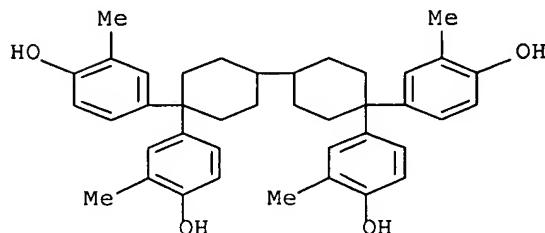
RN 256345-92-3 HCPLUS

CN Phenol, 4,4',4'',4'''-[1,1'-bicyclohexyl]-4,4'-diylidenetetrakis- (9CI) (CA INDEX NAME)



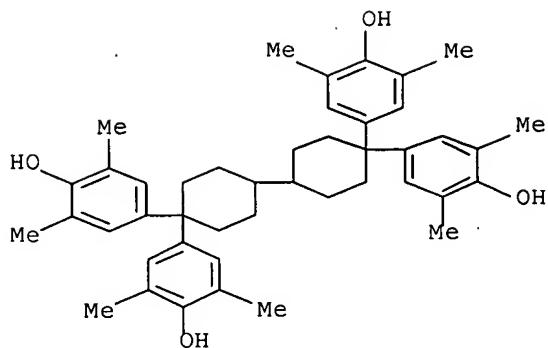
RN 256345-93-4 HCPLUS

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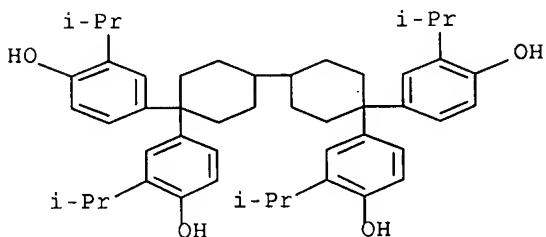
RN 256345-96-7 HCPLUS

CN Phenol, 4,4',4'',4'''-[1,1'-bicyclohexyl]-4,4'-diylidenetetrakis[2,6-dimethyl- (9CI) (CA INDEX NAME)



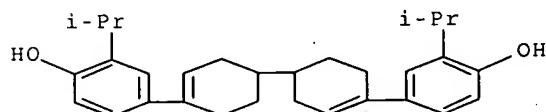
RN 682759-50-8 HCAPLUS

CN Phenol, 4,4',4'',4'''-[1,1'-bicyclohexyl]-4,4'-diylidenetetrakis[2-(1-methylethyl)- (9CI) (CA INDEX NAME)



RN 682759-51-9 HCAPLUS

CN Phenol, 4,4'-[bi-3-cyclohexen-1-yl]-4,4'-diylbis[2-(1-methylethyl)- (9CI) (CA INDEX NAME)



IT 682759-48-4P, 4,4'-Bis(4-hydroxyphenyl)-1,1'-bicyclohex-3-ene

682759-49-5P, 4,4'-Bis(3-methyl-4-hydroxyphenyl)-1,1'-bicyclohex-3-

ene 682759-54-2P, 4,4'-Bis(3,5-dimethyl-4-hydroxyphenyl)-1,1'-bicyclohex-3-ene

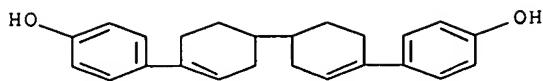
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)

(preparation of 4,4'-bis(hydroxyphenyl)bicyclohexene by thermal decomposition of

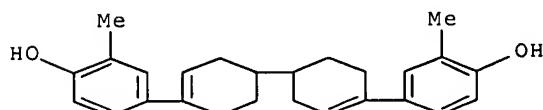
4,4,4',4'-tetrakis(hydroxyphenyl)bicyclohexane in presence of alkaline catalyst)

RN 682759-48-4 HCAPLUS

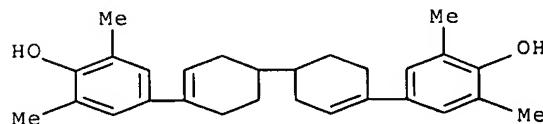
CN Phenol, 4,4'-[bi-3-cyclohexen-1-yl]-4,4'-diylbis- (9CI) (CA INDEX NAME)



RN 682759-49-5 HCAPLUS
 CN Phenol, 4,4'-[bi-3-cyclohexen-1-yl]-4,4'-diylbis[2-methyl- (9CI) (CA INDEX NAME)]

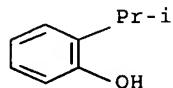


RN 682759-54-2 HCAPLUS
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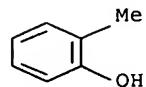


IT 88-69-7, o-Isopropylphenol 95-48-7, o-Cresol, reactions
 108-95-2, Phenol, reactions 576-26-1, 2,6-Xylenol
 23391-99-3, 4,4'-Bicyclohexanone
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of 4,4'-bis(hydroxyphenyl)bicyclohexene by thermal decomposition of
 4,4,4',4'-tetrakis(hydroxyphenyl)bicyclohexane in presence of alkaline catalyst)

RN 88-69-7 HCAPLUS
 CN Phenol, 2-(1-methylethyl)- (9CI) (CA INDEX NAME)



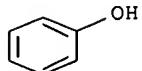
RN 95-48-7 HCAPLUS
 CN Phenol, 2-methyl- (9CI) (CA INDEX NAME)



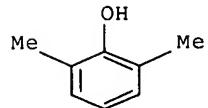
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10/531,358

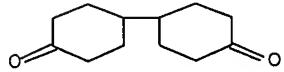
CN Phenol (8CI, 9CI) (CA INDEX NAME)



RN 576-26-1 HCAPLUS
CN Phenol, 2,6-dimethyl- (9CI) (CA INDEX NAME)



RN 23391-99-3 HCAPLUS
CN [1,1'-Bicyclohexyl]-4,4'-dione (9CI) (CA INDEX NAME)

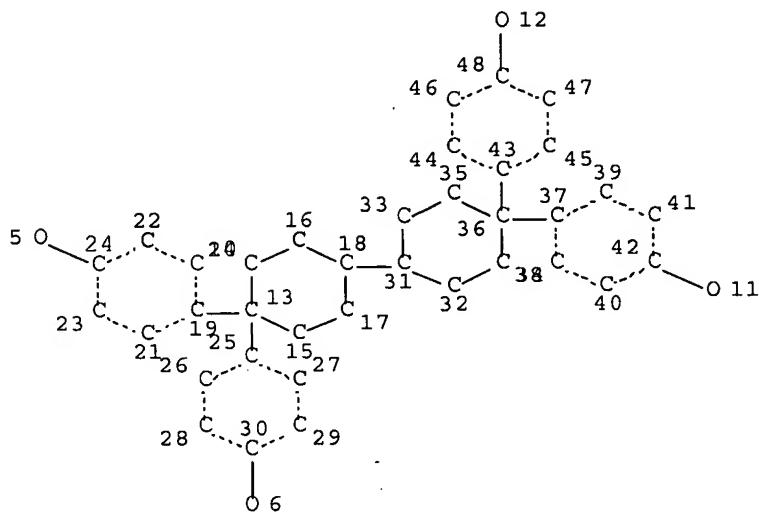


REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

SEARCH FOR "GENERAL FORMULA 2" in REGISTRY AND CAPLUS

=> d que stat 129

L23 STR



NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 40

STEREO ATTRIBUTES: NONE

L25 4 SEA FILE=REGISTRY SSS FUL L23

L26 2 SEA FILE=HCAPLUS ABB=ON L25

L27 2 SEA FILE=HCAPLUS ABB=ON L26 AND (PRD<20050929 OR PD<20050929)

L28 1 SEA FILE=USPATFULL ABB=ON L26 AND (PRD<20050929 OR PD<20050929)

)

L29 3 DUP REMOV L27 L28 (0 DUPLICATES REMOVED)

=> d ibib abs hitstr 129 1-3

L29 ANSWER 1 OF 3 USPATFULL on STN

ACCESSION NUMBER: 2006:152560 USPATFULL Full-text

TITLE: Novel 4,4'-dihydroxyphenyl bicyclohexenes

INVENTOR(S): Satomi, Kouji, Wakayama, JAPAN

Oono, Hiroyasu, Wakayama, JAPAN

Ekawa, Kenji, Wakayama, JAPAN

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2006129001	A1	20060615
APPLICATION INFO.:	US 2003-531358	A1	20031016 (10)
	WO 2003-JP13222		20031016
			20050929 PCT 371 date

NUMBER DATE

PRIORITY INFORMATION: JP 2002-200302887 20021017 <--
 DOCUMENT TYPE: Utility
 FILE SEGMENT: APPLICATION
 LEGAL REPRESENTATIVE: KNOBBE MARTENS OLSON & BEAR LLP, 2040 MAIN STREET,
 FOURTEENTH FLOOR, IRVINE, CA, 92614, US

NUMBER OF CLAIMS: 20
 EXEMPLARY CLAIM: 1
 LINE COUNT: 477

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

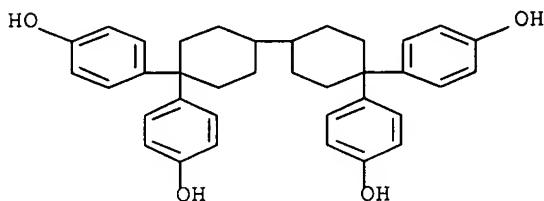
AB Produce new 4,4'-dihydroxyphenyl bicyclohexenes that are useful as a material for liquid crystal polyester, polycarbonate, polyurethane or other synthetic resins or for photoresist used with display elements, semiconductors, etc., by thermally decomposing 4,4,4'4'- tetrahydroxyphenyl bicyclohexanes, preferably in the presence of alkali catalyst.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 256345-92-3P, 4,4,4',4'-Tetrakis(4-hydroxyphenyl)-1,1'-bicyclohexane 256345-93-4P, 4,4,4',4'-Tetrakis(3-methyl-4-hydroxyphenyl)-1,1'-bicyclohexane 256345-96-7P, 4,4,4',4'-Tetrakis(3,5-dimethyl-4-hydroxyphenyl)-1,1'-bicyclohexane 682759-50-8P, 4,4,4',4'-Tetrakis(3-isopropyl-4-hydroxyphenyl)-1,1'-bicyclohexane
 (preparation of 4,4'-bis(hydroxyphenyl)bicyclohexene by thermal decomposition of 4,4,4',4'-tetrakis(hydroxyphenyl)bicyclohexane in presence of alkaline catalyst)

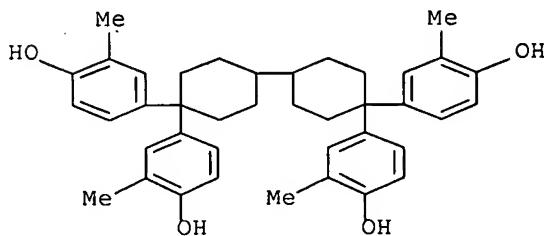
RN 256345-92-3 USPATFULL

CN Phenol, 4,4',4'',4'''-[1,1'-bicyclohexyl]-4,4'-diylidenetetrakis- (9CI)
 (CA INDEX NAME)



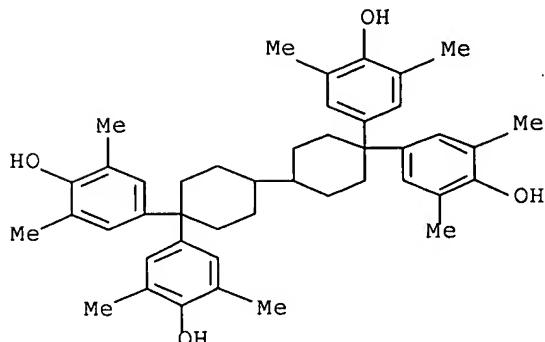
RN 256345-93-4 USPATFULL

CN Phenol, 4,4',4'',4'''-[1,1'-bicyclohexyl]-4,4'-diylidenetetrakis[2-methyl- (9CI) (CA INDEX NAME)]



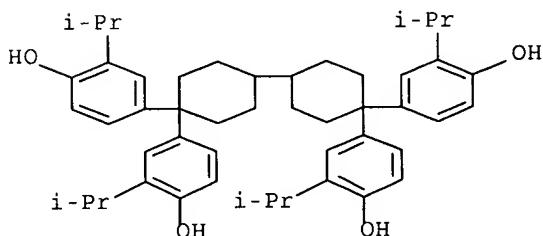
RN 256345-96-7 USPATFULL

CN Phenol, 4,4',4'',4'''-[1,1'-bicyclohexyl]-4,4'-diylidenetetrakis[2,6-dimethyl- (9CI) (CA INDEX NAME)]



RN 682759-50-8 USPATFULL

CN Phenol, 4,4',4'',4'''-[1,1'-bicyclohexyl]-4,4'-diylidenetetrakis[2-(1-methylethyl)- (9CI) (CA INDEX NAME)]



L29 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:354897 HCAPLUS Full-text

DOCUMENT NUMBER: 140:357058

TITLE: Preparation of novel 4,4'-bis(hydroxyphenyl)bicyclohexene and its derivatives

INVENTOR(S): Satomi, Kouji; Oono, Hiroyasu; Ekawa, Kenji

PATENT ASSIGNEE(S): Honshu Chemical Industry Co., Ltd., Japan

SOURCE: PCT Int. Appl., 20 pp.

CODEN: PIXXD2

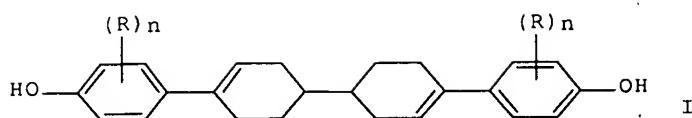
DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

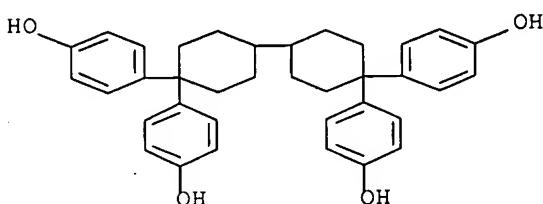
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004035513	A1	20040429	WO 2003-JP13222	20031016 <--
W: JP, US				
US 2006129001	A1	20060615	US 2005-531358	20050929 <--
PRIORITY APPLN. INFO.:			JP 2002-302887	A 20021017 <--
			WO 2003-JP13222	W 20031016 <--
OTHER SOURCE(S):	CASREACT 140:357058; MARPAT 140:357058			



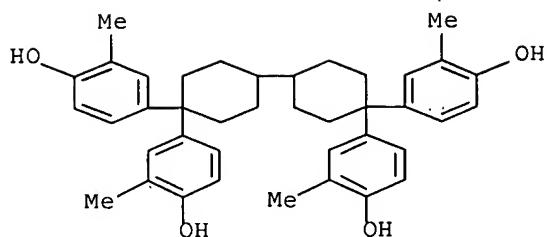
AB Novel 4,4'-bis(hydroxyphenyl)bicyclohexenes (I; R = C1-4 alkyl; n = an integer of 0-3) are produced by thermally decomposing 4,4,4',4'-tetrakis(hydroxyphenyl)bicyclohexanes preferably in the presence of an alkaline catalyst. The 4,4'-dihydroxyphenyl-bicyclohexenes are useful as synthetic resin materials for liquid crystal polyester, polycarbonate, polyurethane and the like, or materials for photoresists of display devices, semiconductors and the like. Thus, phenol was condensed with 4,4'-bicyclohexanone in the presence of dry HCl, dodecyl mercaptan, and methanol at 40° for 20 h to give 89.6% 4,4,4',4'-tetrakis(4-hydroxyphenyl)-1,1'-bicyclohexane which was heated in tetraethylene glycol in the presence of NaOH under reduced pressure (3.0 kpa) with removal of water at 203° for 3 h followed by neutralization with acetic acid to pH 6.0 to give 73.4% 4,4,4',4'-tetrakis(4-hydroxyphenyl)-1,1'-bicyclohex-3-ene.

IT 256345-92-3P, 4,4,4',4'-Tetrakis(4-hydroxyphenyl)-1,1'-bicyclohexane 256345-93-4P, 4,4,4',4'-Tetrakis(3-methyl-4-hydroxyphenyl)-1,1'-bicyclohexane 256345-96-7P, 4,4,4',4'-Tetrakis(3,5-dimethyl-4-hydroxyphenyl)-1,1'-bicyclohexane 682759-50-8P, 4,4,4',4'-Tetrakis(3-isopropyl-4-hydroxyphenyl)-1,1'-bicyclohexane
 RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation of 4,4'-bis(hydroxyphenyl)bicyclohexene by thermal decomposition of 4,4,4',4'-tetrakis(hydroxyphenyl)bicyclohexane in presence of alkaline catalyst)

RN 256345-92-3 HCAPLUS
 CN Phenol, 4,4',4'',4'''-[1,1'-bicyclohexyl]-4,4'-diylidenetetrakis- (9CI)
 (CA INDEX NAME)

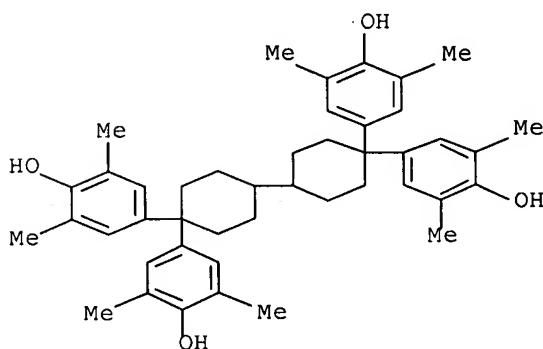


RN 256345-93-4 HCAPLUS
 CN Phenol, 4,4',4'',4'''-[1,1'-bicyclohexyl]-4,4'-diylidenetetrakis[2-methyl-4-hydroxyphenyl]phenol (9CI) (CA INDEX NAME)



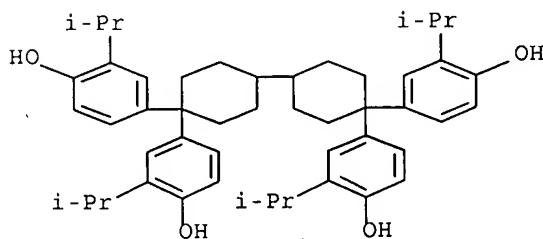
RN 256345-96-7 HCAPLUS

CN Phenol, 4,4',4'',4'''-[1,1'-bicyclohexyl]-4,4'-diylidene[2,6-dimethyl- (9CI) (CA INDEX NAME)



RN 682759-50-8 HCAPLUS

CN Phenol, 4,4',4'',4'''-[1,1'-bicyclohexyl]-4,4'-diylidene[2-(1-methylethyl)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L29 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2000:77105 HCAPLUS Full-text

DOCUMENT NUMBER: 132:123036

TITLE: Tetrakis(hydroxyphenyl)dicyclohexane compounds

INVENTOR(S): Kawasaki, Shinsaku; Kawahara, Mikio; Egawa, Takeshi

PATENT ASSIGNEE(S): Honshu Chemical Industry Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000034248	A	20000202	JP 1998-200736	19980715 <--
JP 3830666	B2	20061004		
PRIORITY APPLN. INFO.:			JP 1998-200736	19980715 <--

OTHER SOURCE(S): MARPAT 132:123036

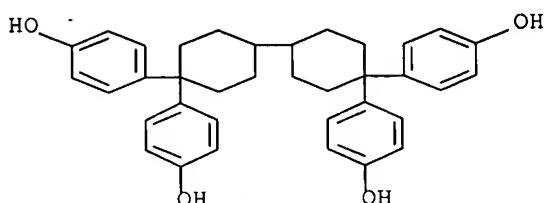
AB The title compds. useful for curing or modifying epoxy resins (no data), are R2ZR2 (Z = dicyclohexane-4,4'-diyl; R = hydroxyphenyl group which is optionally substituted with C1-4 alkyl, C5-6 cycloalkyl and Ph group). Thus, flushing dry HCl gas into a mixture of phenol 55.88, octyl mercaptan 1.94 and water 2.25 while stirring, adding a mixture of 4,4'-bicyclohexanone 19.4 and phenol 19.4 g to the mixture over 50 min and working up gave 4,4,4',4'-tetra(4-hydroxyphenyl)bicyclohexyl.

IT 256345-92-3P 256345-93-4P 256345-96-7P

RL: IMF (Industrial manufacture); PREP (Preparation)
 (manufacture of tetrakis(hydroxyphenyl)dicyclohexane compds.)

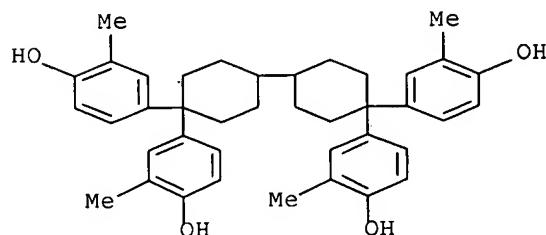
RN 256345-92-3 HCAPLUS

CN Phenol, 4,4',4'',4'''-[1,1'-bicyclohexyl]-4,4'-diylidenetetrakis- (9CI)
 (CA INDEX NAME)



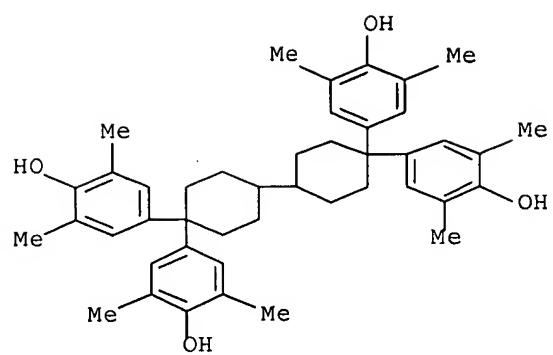
RN 256345-93-4 HCAPLUS

CN Phenol, 4,4',4'',4'''-[1,1'-bicyclohexyl]-4,4'-diylidenetetrakis[2-methyl- (9CI) (CA INDEX NAME)]



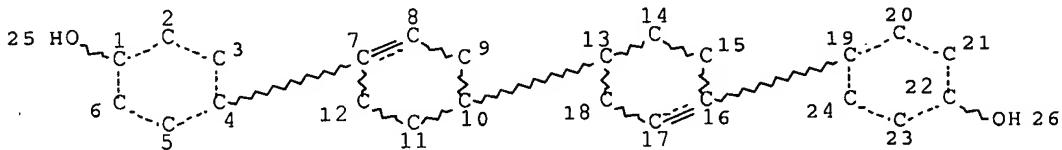
RN 256345-96-7 HCAPLUS

CN Phenol, 4,4',4'',4'''-[1,1'-bicyclohexyl]-4,4'-diylidenetetrakis[2,6-dimethyl- (9CI) (CA INDEX NAME)]



SEARCH FOR "GENERAL FORMULA 1" IN REGISTRY AND CAPLUS (printed last 20 of 161 results; all 161 results have been saved)

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L1 STR



NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 26

STEREO ATTRIBUTES: NONE

L2 (161)SEA FILE=REGISTRY SSS FUL L1
L3 (162)SEA FILE=HCAPLUS ABB=ON L2
L4 161 SEA FILE=HCAPLUS ABB=ON L3 AND (PRD<20050929 OR PD<20050929)

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L4 ANSWER 142 OF 161 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1991:633204 HCAPLUS Full-text
DOCUMENT NUMBER: 115:233204
TITLE: Aliphatic polyesters
INVENTOR(S): Yamagata, Kazuo; Tsuchiyama, Kazuo; Yamaguchi, Makoto; Osuga, Makoto; Niki, Akihiro; Saito, Toranosuke; Kadomachi, Hironori; Kishimoto, Daishiro
PATENT ASSIGNEE(S): Sekisui Chemical Co. Ltd., Japan; Sanko Kaihatsu Kagaku Kenkyusho
SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03097723	A	19910423	JP 1989-235375	19890911 <--
JP 2556907	B2	19961127		

PRIORITY APPLN. INFO.: JP 1989-235375 19890911 <--

AB Title polyesters useful as thermoplastic elastomers with good heat resistance and mech. strength are composed of aliphatic dicarboxylic acids $\text{HO}_2\text{C}(\text{CH}_2)_n\text{CO}_2\text{H}$ ($\text{I}; n = 0-10$), aliphatic diols, either dihydroxy compds. 1,4-
 $\text{HO}(\text{R}_1\text{O})_q(\text{C}_6\text{H}_4)_p(\text{OR}_2)_r\text{OH}$ ($\text{R}_1, 2 = \text{alkylenes}, p = 3, 4; q, r \geq 0$) or
 monohydroxy compds. $\text{Ph}-1,4-(\text{C}_6\text{H}_4)_l(\text{OR}_3)_m\text{OH}$ ($\text{R}_3 = \text{alkylene}; l = 2, 3; m \geq 0$),
 and 0.25-2.5 equivalent (vs. 100 mol I) ≥ 1 branching agents selected from 3-6
 OH-containing polyols, 3-4 carboxyl-containing polycarboxylic acids, and
 oxycarboxylic acids containing 2-6 OH and carboxyl groups. Thus, di-Me
 adipate 87.1, $\text{HOCH}_2\text{CH}_2\text{OH}$ 74.4, 4,4''-dihydroxy-p- quarterphenyl 17.8, Me

trimellitate (II) 0.441, Ca(OAc)₂ 0.172, and GeO₂ 0.036 g were heated to give a polyester, which was then injection molded to give test pieces showing modulus 150 and 111 kg/cm², tensile strength 100 and 45 kg/cm², and elongation 470 and 523% (room temperature and 100°, resp.), vs. 152, 60, 105, 36, 480, and 300, resp., for the polyester similarly prepared without II.

IT 137316-89-3P

RL: PREP (Preparation)

(preparation of, with good mech. strength and heat resistance).

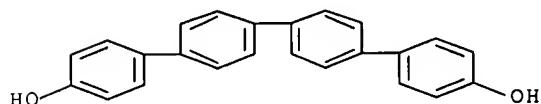
RN 137316-89-3 HCPLUS

CN Hexanedioic acid, dimethyl ester, polymer with 1,2-ethanediol, methyl 1,2,4-benzenetricarboxylate and [1,1':4',1'':4'',1'''-quaterphenyl]-4,4'''-diol (9CI) (CA INDEX NAME)

CM 1

CRN 10508-41-5

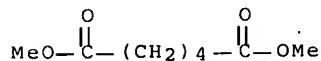
CMF C24 H18 O2



CM 2

CRN 627-93-0

CMF C8 H14 O4



CM 3

CRN 107-21-1

CMF C2 H6 O2



CM 4

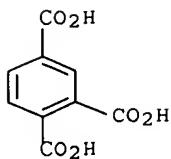
CRN 51281-39-1

CMF C9 H6 O6 . x C H4 O

CM 5

CRN 528-44-9

CMF C9 H6 O6



CM 6

CRN 67-56-1
CMF C H4 OH₃C—OH

L4 ANSWER 143 OF 161 HCPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1991:609996 HCPLUS Full-text
 DOCUMENT NUMBER: 115:209996
 TITLE: Heat- and chemical-resistant elastomer compositions containing polyesters
 INVENTOR(S): Yamagata, Kazuo; Tsuchama, Kazuo; Yamaguchi, Makoto; Oosuga, Makoto; Niki, Akihiro; Saito, Toranosuke; Kadomachi, Hironori; Kishimoto, Daishiro
 PATENT ASSIGNEE(S): Sekisui Chemical Co. Ltd., Japan; Sanko Kaihatsu Kagaku Kenkyusho
 SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03115337	A	19910516	JP 1989-252825	19890928 <--
JP 07051648	B	19950605		

PRIORITY APPLN. INFO.: JP 1989-252825 19890928 <--
 AB Title compns., useful for wire coatings, belts, automobile parts, tubes, etc., contain 5-85% vulcanizing rubbers and 15-95% polyesters prepared from HO₂C(CH₂)_nCO₂H (n = 0-10), aliphatic diols, and ≥1 compound selected from HO(R₁O)_q(p-C₆H₄)_p(OR₂)_rOH (R₁-2 = alkylene; q, r ≥ 0; p = 3-4) and Ph(p-C₆H₄)_l(OR₃)_mOH (R₃ = alkylene; l = 2-3; m ≥ 0). A polyester (I) prepared from di-Me adipate 268.2, HOCH₂CH₂OH 313.6, and 4,4'''-dihydroxy-p-quaterphenyl 60.9 g was blended with JSR SBR 1500 (SBR rubber) in 1:1 ratio at 200° and press vulcanized with S and 1,3-diphenylguanidine at 145° for 35 min to give a molding showing elongation 720%, volume change after 70 h in oil +26%, and no change in appearance during 5 days in benzene, vs. 570, +48, and swelling, resp., without I.

IT 136314-51-7

RL: USES (Uses)

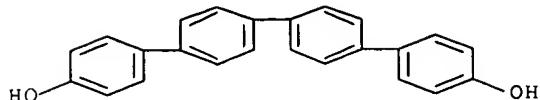
(rubbers containing, vulcanized, heat- and chemical-resistant)

RN 136314-51-7 HCPLUS

CN Hexanedioic acid, dimethyl ester, polymer with 1,2-ethanediol and [1,1':4',1'':4'',1'''-quaterphenyl]-4,4'''-diol (9CI) (CA INDEX NAME)

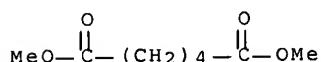
CM 1

CRN 10508-41-5
CMF C24 H18 O2



CM 2

CRN 627-93-0
CMF C8 H14 O4



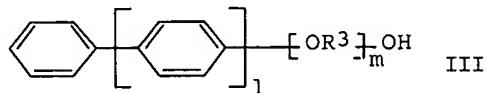
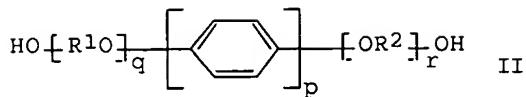
CM 3

CRN 107-21-1
CMF C2 H6 O2



L4 ANSWER 144 OF 161 HCPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1991:585145 HCPLUS Full-text
 DOCUMENT NUMBER: 115:185145
 TITLE: Manufacture of polyester elastomers
 INVENTOR(S): Tsuchama, Kazuo; Yamaguchi, Makoto; Oosuga, Makoto;
 Yamagata, Kazuo; Niki, Akihiro; Saito, Toranosuke;
 Kadomachi, Hironori; Kishimoto, Taishiro
 PATENT ASSIGNEE(S): Sekisui Chemical Co. Ltd., Japan; Sanko Kaihatsu
 Kagaku Kenkyusho
 SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03103433	A	19910430	JP 1989-239688	19890914 <--



AB Title elastomers, heat-resistant with good moldability, are manufactured from a monomer mixture of HO₂C(CH₂)_nCO₂H (I; n = 0-10), aliphatic diols, and II (R₁, R₂ = alkylene; p = 3, 4; q, r ≥ 0) and/or III (R₃ = alkylene; l = 2, 3; m ≥ 0) containing 0.001-5% hindered phenol antioxidants and 0.001-5% S-based stabilizers. Thus, a mixture of di-Me adipate 87.1, ethylene glycol 74.4, and 4,4'''-dihydroxy-p-quaterphenyl 16.7 g was transesterified and polycondensed in the presence of Sb₂O₃, Ca(OAc)₂, 0.05% 3,9-bis[2-[3-(3-tert-butyl-4-hydroxy-5-methylphenyl)propionyloxy]-1,1-dimethylethyl]-2,4,8,10-tetraoxaspiro[5.5]undecane (IV) and 0.05% dilauryl 3,3'-thiodipropionate (V) to give a pale yellow polymer with intrinsic viscosity 1.55 in o-chlorophenol at 30° while the polymer decomposed without IV and V.

IT 136314-51-7P

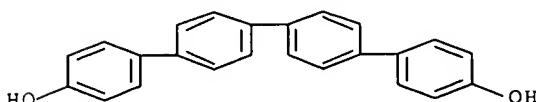
RL: IMF (Industrial manufacture); PREP (Preparation)
(elastomer, preparation of, containing hindered phenols and sulfur compds., heat-resistant)

RN 136314-51-7 HCPLUS

CN Hexanedioic acid, dimethyl ester; polymer with 1,2-ethanediol and [1,1':4',1'':4'',1'''-quaterphenyl]-4,4'''-diol (9CI) (CA INDEX NAME)

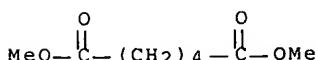
CM 1

CRN 10508-41-5

CMF C₂₄ H₁₈ O₂

CM 2

CRN 627-93-0

CMF C₈ H₁₄ O₄

CM 3

CRN 107-21-1
CMF C2 H6 O2HO—CH₂—CH₂—OH

L4 ANSWER 145 OF 161 HCPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1991:585143 HCPLUS Full-text
 DOCUMENT NUMBER: 115:185143
 TITLE: Thin sheet moldings of polyester elastomers
 INVENTOR(S): Osuga, Makoto; Tsuchiyama, Kazuo; Yamaguchi, Makoto;
 Yamagata, Kazuo; Niki, Akihiro; Saito, Toranosuke;
 Kadomachi, Hironori; Kishimoto, Daishiro
 PATENT ASSIGNEE(S): Sekisui Chemical Co. Ltd., Japan; Sanko Kaihatsu
 Kagaku Kenkyusho
 SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03115325	A	19910516	JP 1989-252823	19890928 <--
PRIORITY APPLN. INFO.:			JP 1989-252823	19890928 <--

AB Polyester elastomers are prepared from C2-12 linear aliphatic dicarboxylic acids, aliphatic diols, and ≥ 1 compound selected from dihydroxy polyphenyls, such as 4,4'''-dihydroxy-p-quaterphenyl (I), and monohydroxy polyphenyls. Thus, a 25- μ m film was prepared from di-Me adipate-ethylene glycol-I copolymer and did not break at 0° or at -30° in the Izod impact strength test.

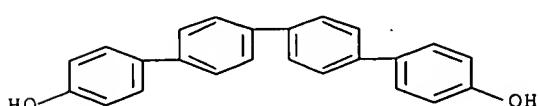
IT 136314-51-7

RL: USES (Uses)
(rubber, for films)

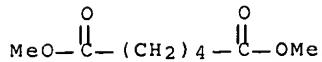
RN 136314-51-7 HCPLUS

CN Hexanedioic acid, dimethyl ester, polymer with 1,2-ethanediol and [1,1':4',1'''':4'',1''''-quaterphenyl]-4,4'''-diol (9CI) (CA INDEX NAME)

CM 1

CRN 10508-41-5
CMF C24 H18 O2

CM 2

CRN 627-93-0
CMF C8 H14 O4

CM 3

CRN 107-21-1
CMF C2 H6 O2

L4 ANSWER 146 OF 161 HCPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1991:584655 HCPLUS Full-text
 DOCUMENT NUMBER: 115:184655
 TITLE: Fiber-reinforced polyester composite
 INVENTOR(S): Tsuchiyama, Kazuo; Yamaguchi, Makoto; Osuga, Makoto;
 Yamagata, Kazuo; Niki, Akihiro; Saito, Toranosuke;
 Kadomachi, Hironori; Kishimoto, Daishiro
 PATENT ASSIGNEE(S): Sekisui Chemical Co. Ltd., Japan; Sanko Kaihatsu
 Kagaku Kenkyusho K. K.
 SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03118151	A	19910520	JP 1989-256574	19890929 <--
JP 08005175	B	19960124		

PRIORITY APPLN. INFO.: JP 1989-256574 19890929 <--

AB The title composite, with good softness, comprises reinforcing fibers and polyesters from aliphatic dicarboxylic acids, aliphatic diols, and dihydroxy Ph compds. and/or monohydroxy Ph compds. A composite, prepared by sandwiching glass cloth between 2-ply di-Me adipate-ethylene glycol-HO-(p-C₆H₄)₄O (0.5:1.2:0.05 mol) copolymer sheets at 250°, had tensile strength 35 kg/mm² with good softness.

IT 136314-51-7

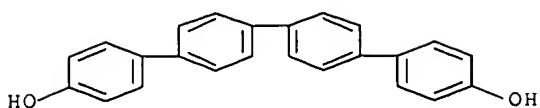
RL: USES (Uses)
 (fiber-reinforced, soft)

RN 136314-51-7 HCPLUS

CN Hexanedioic acid, dimethyl ester, polymer with 1,2-ethanediol and [1,1':4',1'':4'',1''''-quaterphenyl]-4,4''''-diol (9CI) (CA INDEX NAME)

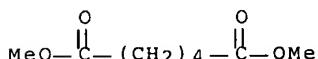
CM 1

CRN 10508-41-5
CMF C24 H18 O2



CM 2

CRN 627-93-0
CMF C8 H14 O4



CM 3

CRN 107-21-1
CMF C2 H6 O2



L4 ANSWER 147 OF 161 HCPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1991:584206 HCPLUS Full-text
 DOCUMENT NUMBER: 115:184206
 TITLE: Preparation of aliphatic polyesters
 INVENTOR(S): Yamaguchi, Makoto; Tsuchama, Kazuo; Oosuga, Makoto;
 Yamagata, Kazuo; Niki, Akihiro; Saito, Toranosuke;
 Kadomachi, Hironori; Kishimoto, Daishiro
 PATENT ASSIGNEE(S): Sekisui Chemical Co. Ltd., Japan; Sanko Kaihatsu
 Kagaku Kenkyusho
 SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03097728	A	19910423	JP 1989-235373	19890911 <--
JP 2551663	B2	19961106		

PRIORITY APPLN. INFO.: JP 1989-235373 19890911 <--
 AB The title polyesters useful as thermoplastic elastomers with good heat
 resistance and mech. strength are prepared by treating aliphatic dicarboxylic
 acids of general formula HO₂C(CH₂)_nCO₂H (n = 0-10 integers), aliphatic diols,

and either dihydroxy compds. of general formula 1,4- HO(R1O)_q(C₆H₄)_p(OR₂)_rOH (R_{1,2} = alkylene, p = 3, 4; q, r = 0 or \geq 1), or monohydroxy compds. of general formula C₆H₅-1,4-(C₆H₄)_l(OR₃)_mOH (R₃ = alkylene; l = 2, 3; m = 0 or \geq 1) in the presence of catalysts comprising Ge compds. and metal acetates. Thus, 4-hydroxy-4'-bromobiphenyl 60.0, 5%-Pd/C 13, 10% aqueous NaOH 300, and MeOH 300 g were treated to give 4,4'''-dihydroxy-p-quaterphenyl (I). Sep. di-Me adipate 1.0, HOCH₂CH₂OH 2.4, Ca(OAc)₂ (II) 0.3 + 10-3, and GeO₂ 6.5 + 10-4 mol were treated to give bis(2-hydroxyethyl)adipate, into which 0.075 mol of I was added and the resulting mixture was heated to obtain a colorless polyester with intrinsic viscosity of 1.41. A polyester similarly prepared without II was yellow-colored with intrinsic viscosity of 0.50.

IT 126842-95-3P, Bis(2-hydroxyethyl)adipate-4,4'''-dihydroxy-p-quaterphenyl copolymer

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (preparation of, in presence of germanium compds. and metal acetates, with good mech. strength and heat resistance)

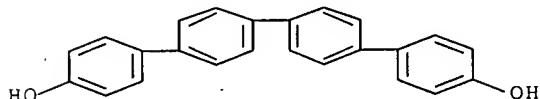
RN 126842-95-3 HCPLUS

CN Hexanedioic acid, bis(2-hydroxyethyl) ester, polymer with [1,1':4',1'':4'',1'''-quaterphenyl]-4,4'''-diol (9CI) (CA INDEX NAME)

CM 1

CRN 10508-41-5

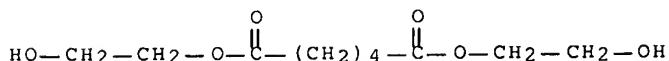
CMF C24 H18 O2



CM 2

CRN 1700-12-5

CMF C10 H18 O6

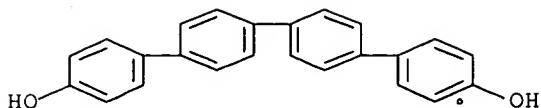


IT 132971-30-3

RL: RCT (Reactant); RACT (Reactant or reagent) (reaction of, for dihydroxyquaterphenyl)

RN 132971-30-3 HCPLUS

CN [1,1':4',1'':4'',1'''-Quaterphenyl]-4,4'''-diol, disodium salt (9CI) (CA INDEX NAME)



●2 Na

L4 ANSWER 148 OF 161 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1991:561021 HCAPLUS Full-text
 DOCUMENT NUMBER: 115:161021
 TITLE: Aliphatic polyester manufacture in the presence of stabilizers
 INVENTOR(S): Tsuchiyama, Kazuo; Yamaguchi, Makoto; Oosuga, Makoto; Oosuga, Makoto; Niki, Akihiro; Saito, Toranosuke; Kadomachi, Hironori; Kishimoto, Daishiro
 PATENT ASSIGNEE(S): Sekisui Chemical Co. Ltd., Japan; Sanko Kaihatsu Kagaku Kenkyusho K. K.
 SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03097726	A	19910423	JP 1989-235376	19890911 <--
JP 2551665	B2	19961106		

PRIORITY APPLN. INFO.: JP 1989-235376 19890911 <--
 AB Thermoplastic elastomeric polyesters are prepared from aliphatic dicarboxylic acids, aliphatic diols, and di- and/or monohydroxypolypheyls in the presence of 0.001-5% hindered phenol antioxidants and 0.001-5% P compound stabilizers. Thus, heating di-Me adipate 87.1, ethylene glycol 74.4, and 4,4'''-p-quaterphenyldiol 16.7 g with Sb2O3 20, Ca(OAc)2 80, 1,3,5-trimethyl-2,4,6-tris(3,5-di-tert-butyl-4-hydroxybenzyl)benzene 90, and tris(2,4-di-tert-butylphenyl) phosphite 19 mg gave a light-yellow polymer; vs. black without stabilizers.

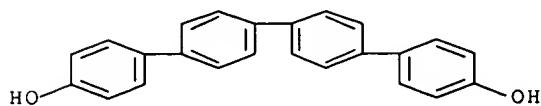
IT 10508-41-5DP, esters with polyesters 136314-51-7P

RL: PREP (Preparation)

(rubber, antioxidants and heat stabilizers for manufacture of)

RN 10508-41-5 HCAPLUS

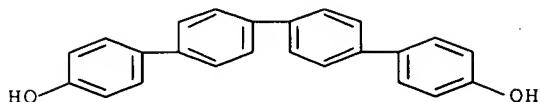
CN [1,1':4',1'':4'',1'''-Quaterphenyl]-4,4'''-diol (9CI) (CA INDEX NAME)



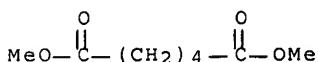
RN 136314-51-7 HCAPLUS

CN Hexanedioic acid, dimethyl ester, polymer with 1,2-ethanediol and [1,1':4',1'':4'',1'''-quaterphenyl]-4,4'''-diol (9CI) (CA INDEX NAME)

CM 1

CRN 10508-41-5
CMF C24 H18 O2

CM 2

CRN 627-93-0
CMF C8 H14 O4

CM 3

CRN 107-21-1
CMF C2 H6 O2

L4 ANSWER 149 OF 161 HCPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1991:538022 HCPLUS Full-text
 DOCUMENT NUMBER: 115:138022
 TITLE: Thermoplastic elastomeric polyesters
 INVENTOR(S): Oosuga, Makoto; Tsuchama, Kazuo; Yamaguchi, Makoto;
 Yamagata, Kazuo; Niki, Akihiro; Saito, Toranosuke;
 Kadomachi, Hironori; Kishimoto, Daishiro
 PATENT ASSIGNEE(S): Sekisui Chemical Co. Ltd., Japan; Sanko Kaihatsu
 Kagaku Kenkyusho K. K.
 SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03097725	A	19910423	JP 1989-235374	19890911 <--
JP 2551664	B2	19961106		
PRIORITY APPLN. INFO.:			JP 1989-235374	19890911 <--

AB The title polyesters are prepared from C2-12 alkanedioic acids, polyphenyldiols [e.g. as 4,4'''-p-quaterphenyldiol (I)], and aliphatic diols. Di-Me adipate-ethylene glycol-I copolymer was prepared

IT 136314-51-7P

RL: PREP (Preparation)
(rubber, thermoplastic, manufacture of)

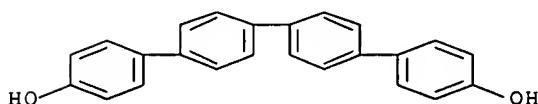
RN 136314-51-7 HCAPLUS

CN Hexanedioic acid, dimethyl ester, polymer with 1,2-ethanediol and [1,1':4',1''':4'',1'''-quaterphenyl]-4,4'''-diol (9CI) (CA INDEX NAME)

CM 1

CRN 10508-41-5

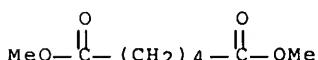
CMF C24 H18 O2



CM 2

CRN 627-93-0

CMF C8 H14 O4



CM 3

CRN 107-21-1

CMF C2 H6 O2



L4 ANSWER 150 OF 161 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1991:430091 HCAPLUS Full-text

DOCUMENT NUMBER: 115:30091

TITLE: Ring-opening polymerized polylactones with good solubility and fusibility

INVENTOR(S): Niki, Akihiro; Tsuchiyama, Kazuo; Osuga, Makoto; Yamaguchi, Makoto; Saito, Toranosuke; Kadomachi, Hironori; Kishimoto, Daishiro

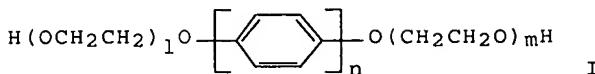
PATENT ASSIGNEE(S): Sekisui Chemical Co. Ltd., Japan; Sanko Kaihatsu Kagaku Kenkyusho

SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 02311523	A	19901227	JP 1989-133369	19890526 <--
JP 2572129	B2	19970116		
PRIORITY APPLN. INFO.:			JP 1989-133369	19890526 <--
GI				



AB The title polylactones, useful for manufacturing heat-resistant urethane or polyester rubbers, are prepared by ring-opening polymerization with dihydroxy compds. $\text{H}(\text{OC}_2\text{H}_4)_1\text{p-O-(C}_6\text{H}_4\text{)}_n\text{O-(C}_2\text{H}_4\text{O})_m\text{H}$ ($l, m \geq 0, n = 3, 4$) as polymerization initiators. Thus, a Grinard reagent from 4-methoxy-4'-bromobiphenyl was coupled with 4-bromoanisole and treated with PBr_3 to give 4,4"-dihydroxy-p-terphenyl having DMF solubility (A, 25°) 7 g/100 g, 300 parts of which was treated with 700 parts ϵ -caprolactone in the presence of $(\text{BuO})_4\text{Ti}$ at 200° for 4 h to give a polylactone having intrinsic viscosity 0.11, m.p. $38-41^\circ$, and A 59 g/100 g.

IT 134157-49-6P

RL: PREP (Preparation)

(preparation of, by ring-opening polymerization, initiators for, dihydroxy polyphenylene compds. as, for solubility and fusibility improvement)

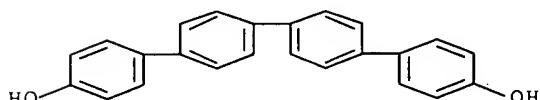
RN 134157-49-6 HCPLUS

CN 2-Oxepanone, polymer with [1,1':4',1'':4'',1''':-quaterphenyl]-4,4'''-diol (9CI) (CA INDEX NAME)

CM 1

CRN 10508-41-5

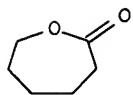
CMF C24 H18 O2



CM 2

CRN 502-44-3

CMF C6 H10 O2



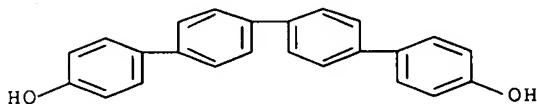
IT 10508-41-5

RL: USES (Uses)

(ring-opening polymerization initiators, for preparation of polylactones,
for solubility
and fusibility improvement)

RN 10508-41-5 HCPLUS

CN [1,1':4',1'':4'',1'''-Quaterphenyl]-4,4''''-diol (9CI) (CA INDEX NAME)



L4 ANSWER 151 OF 161 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1991:248031 HCPLUS Full-text

DOCUMENT NUMBER: 114:248031

TITLE: 4-Hydroxy-p-quaterphenyl derivatives for preparation
of aliphatic polyestersINVENTOR(S): Tsuchiyama, Kazuo; Niki, Akihiro; Yamaguchi, Makoto;
Osuga, Makoto; Saito, Toranosuke; Kadomachi, Hironori;
Kishimoto, DaishiroPATENT ASSIGNEE(S): Sekisui Chemical Co. Ltd., Japan; Sanko Kaihatsu
Kagaku Kenkyusho

SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 02311524	A	19901227	JP 1989-133365	19890526 <--
JP 2556899	B2	19961127	JP 1989-133365	19890526 <--

PRIORITY APPLN. INFO.: MARPAT 114:248031

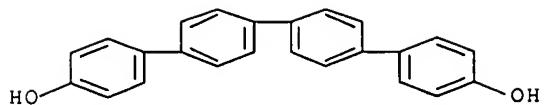
OTHER SOURCE(S): AB The title compds. Ph(R)3OR' [R = 1,4-phenylene; R1 = alkyl, COR2, (R3O)nH; R2 = alkyl; R3 = alkylene; n = 0,1] are useful for the preparation of heat-resistant polyesters. Thus, a polyester, prepared by the polycondensation of 1 mol bis(2-hydroxyethyl) adipate with 0.025 mol hydroquinone and 0.125 mol 4,4''''-dihydroxy-p-quarter Ph, had m.p. 305°.

IT 10508-41-5P

RL: PREP (Preparation)
(preparation of)

RN 10508-41-5 HCPLUS

CN [1,1':4',1'':4'',1'''-Quaterphenyl]-4,4''''-diol (9CI) (CA INDEX NAME)



IT 126842-99-7P 133880-98-5P

RL: PREP (Preparation)

(preparation of, heat-resistant)

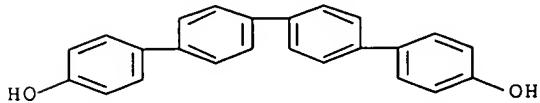
RN 126842-99-7 HCPLUS

CN Hexanedioic acid, bis(2-hydroxyethyl) ester, polymer with 1,4-benzenediol and [1,1':4',1'':4'',1'''-quaterphenyl]-4,4'''-diol (9CI) (CA INDEX NAME)

CM 1

CRN 10508-41-5

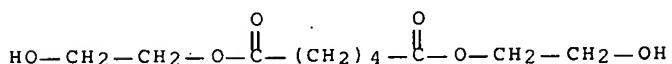
CMF C24 H18 O2



CM 2

CRN 1700-12-5

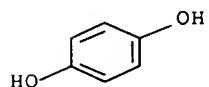
CMF C10 H18 O6



CM 3

CRN 123-31-9

CMF C6 H6 O2



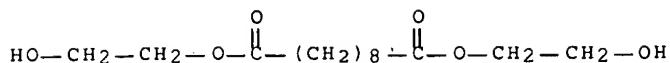
RN 133880-98-5 HCPLUS

CN Decanedioic acid, bis(2-hydroxyethyl) ester, polymer with 1,4-benzenediol and [1,1':4',1'':4'',1'''-quaterphenyl]-4,4'''-diol (9CI) (CA INDEX NAME)

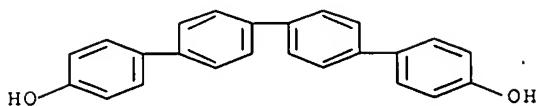
CM 1

CRN 17200-46-3

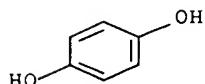
CMF C14 H26 O6



CM 2

CRN 10508-41-5
CMF C24 H18 O2

CM 3

CRN 123-31-9
CMF C6 H6 O2

L4 ANSWER 152 OF 161 HCPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1991:228510 HCPLUS Full-text
 DOCUMENT NUMBER: 114:228510
 TITLE: Preparation of 4,4'''-dihydroxyquater-phenyl and its derivatives
 INVENTOR(S): Saito, Toranosuke; Ikemoto, Kenichi; Sakaguchi, Katsuya; Hirakawa, Norio
 PATENT ASSIGNEE(S): Sanko Kaihatsu Kagaku Kenkyusho, Japan
 SOURCE: Eur. Pat. Appl., 7 pp.
 CODEN: /EPXXDW
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 390945	A1	19901010	EP 1989-105955	19890405 <--
EP 390945	B1	19931118		
R: CH, DE, FR, GB, LI				
PRIORITY APPLN. INFO.:			EP 1989-105955	19890405 <--
OTHER SOURCE(S):	MARPAT 114:228510			

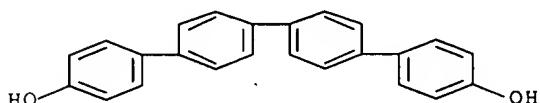
AB Dihydroxyquaterphenyl derivs. I (R = H, Cl-4 alkyl, acyl) are prepared by Pd-catalyzed dehalogenation/dimerization of hydroxyhalobiphenyl derivs. II (X = halo) in inert, organic, polar solvents in the presence of hydroxides, carbonates, or bicarbonates of alkali or alkaline earth metals. Thus, a mixture of 4-hydroxy-4'-bromobiphenyl 60.0, MeOH 100, aqueous 10% NaOH 300, and 5% Pd/C 13 g was stirred 4 h at 120° and 4-5 atm to give, after workup in 2 crops, 73.2% I (R = H) of >98% purity.

IT 10508-41-5P 132971-30-3P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, by dehalogenation and dimerization of hydroxybromobiphenyl or acetoxybromobiphenyl)

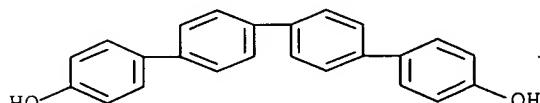
RN 10508-41-5 HCPLUS

CN [1,1':4',1'':4'',1''':-Quaterphenyl]-4,4''':-diol (9CI) (CA INDEX NAME)



RN 132971-30-3 HCPLUS

CN [1,1':4',1'':4'',1''':-Quaterphenyl]-4,4''':-diol, disodium salt (9CI) (CA INDEX NAME)



●2 Na

L4 ANSWER 153 OF 161 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1991:184979 HCPLUS Full-text

DOCUMENT NUMBER: 114:184979

TITLE: Preparation of 4,4''':-Dihydroxyquaterphenyl derivatives

INVENTOR(S): Saito, Toranosuke; Ikemoto, Kenichi; Kadomachi, Hironori

PATENT ASSIGNEE(S): Sanko Kaihatsu Kagaku Kenkyusho K. K., Japan; Sekisui Chemical Co. Ltd.

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

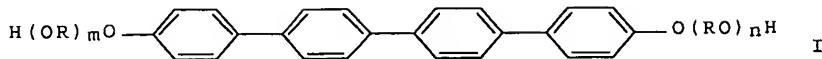
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 02268129	A	19901101	JP 1989-87900	19890410 <--
JP 2636042	B2	19970730	JP 1989-87900	19890410 <--

PRIORITY APPLN. INFO.: JP 1989-87900

OTHER SOURCE(S) :

MARPAT 114:184979

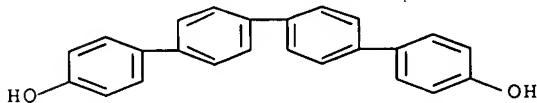
GI



AB The title compds. (I; R = alkylene; m, n = 0, 1; m ≠ n = 0), useful as monomers, were prepared by treatment of I (m = n = 0) (II) with alkylene oxides, alkylene carbonates, or haloalkanols. K₂CO₃ was added to a stirring mixture of II, ethylene carbonate, and sulfolane at 130-140°, after 30 min K₂CO₃ was added again and the reaction mixture was further stirred at 160° for 3 h to give 98% I (R = CH₂CH₂, m = n = 1).

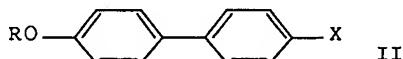
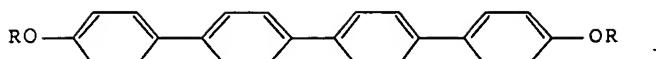
IT 10508-41-5
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (hydroxyalkylation of, with alkylene oxides or alkylene carbonates or haloalkanols, bis(hydroxyalkoxy)quaterphenyl from)

RN 10508-41-5 HCPLUS
 CN [1,1':4',1'':4'',1''':4''':1''''-Quaterphenyl]-4,4''''-diol (9CI) (CA INDEX NAME)



L4 ANSWER 154 OF 161 HCPLUS . COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1991:163758 HCPLUS Full-text
 DOCUMENT NUMBER: 114:163758
 TITLE: Preparation of 4,4''''-dihydroxyquaterphenyl and its derivatives
 INVENTOR(S): Saito, Toranosuke; Ikemoto, Kenichi; Hirakawa, Norio;
 Sakaguchi, Katsuya
 PATENT ASSIGNEE(S): Sanko Kaihatsu Kagaku Kenkyusho, Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 02255634	A	19901016	JP 1989-75173	19890329 <--
PRIORITY APPLN. INFO.:			JP 1989-75173	19890329 <--
OTHER SOURCE(S):	MARPAT 114:163758			
GI				



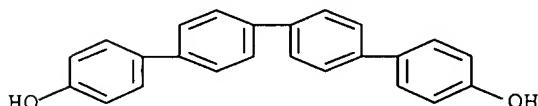
AB The title compds. I (R = H, alkyl, acyl), useful as materials for liquid crystals, heat-resistant polymers, and synthetic rubber modifiers, etc., are prepared by dehalogenation-dimerization of hydroxyhalobiphenyls II (X = halo) in inert organic polar solvents in the presence of hydroxides, carbonates, and/or bicarbonates of alkali metals or alkaline earth metals. Thus, a mixture of II (R = H, X = Br), MeOH, aqueous NaOH solution, and Pd/C was autoclaved at 120° under 4-5 atm for 4 h, then filtered. The obtained solid was stirred in DMF under heating for 1 h, filtered, and the filtrate was acidified to give 60.1% I (R = H).

IT 132971-30-3P, 4,4'''-Dihydroxyquaterphenyl disodium salt

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and acidification of)

RN 132971-30-3 HCAPLUS

CN [1,1':4',1'':4'',1'''-Quaterphenyl]-4,4'''-diol, disodium salt (9CI) (CA INDEX NAME)



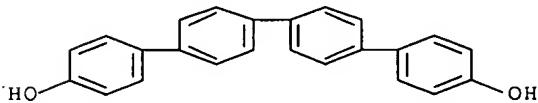
●2 Na

IT 10508-41-5DP, dialkyl diethers 10508-41-5P,
4,4'''-Dihydroxyquaterphenyl

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, by dimerization of halohydroxybiphenyl or its derivs.)

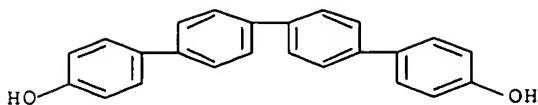
RN 10508-41-5 HCAPLUS

CN [1,1':4',1'':4'',1'''-Quaterphenyl]-4,4'''-diol (9CI) (CA INDEX NAME)



RN 10508-41-5 HCAPLUS

CN [1,1':4',1'':4'',1'''-Quaterphenyl]-4,4'''-diol (9CI) (CA INDEX NAME)



L4 ANSWER 155 OF 161 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1990:533151 HCAPLUS Full-text
 DOCUMENT NUMBER: 113:133151
 TITLE: Vinyl chloride polymers with good heat resistance
 INVENTOR(S): Fujii, Noriki; Shibasaki, Yukio; Kato, Masaharu
 PATENT ASSIGNEE(S): Sekisui Chemical Co. Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 02049024	A	19900219	JP 1988-201381	19880811 <--
			JP 1988-201381	19880811 <--

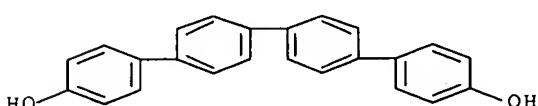
PRIORITY APPLN. INFO.:
 AB Title polymers are prepared by polycondensation of CO₂H-terminated (both ends) vinyl chloride polymers and OH-terminated (both ends) phenol compds. Thus, a mixture of partly saponified poly(vinyl alc.) 5, 4,4'-azobis(4-cyanopentanoic acid) 360, and vinyl chloride 1000 g in 12 kg H₂O was heated at 75° for 5 h to obtain a polymer (I) containing 2.2% CO₂H with average d.p. 65. Treating 1.5 kg Ph₃PO with 0.63 g oxalyl chloride in PhCl, and heating with I 9.4, bisphenol A 0.52, and Et₃N 0.94 g in the presence of 20 mL pyridine at 100° for 4 h gave a polymer (average d.p. 480) showing glass transition temperature 92.5° and liberated HCl 6800 ppm, vs. 83 and 8000, resp., for PVC with average d.p. 480.

IT 10508-41-5DP, copolymers with carboxy-terminated poly(vinyl chloride)

RL: PREP (Preparation)
 (preparation of, with good heat resistance)

RN 10508-41-5 HCAPLUS

CN [1,1':4',1'':4'',1''':-Quaterphenyl]-4,4''':-diol (9CI) (CA INDEX NAME)



L4 ANSWER 156 OF 161 HCAPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1990:425084 HCAPLUS Full-text
 DOCUMENT NUMBER: 113:25084
 TITLE: Manufacture of heat-resistant polycarbonates containing quaterphenyl units
 INVENTOR(S): Osuga, Makoto; Niki, Akihiro; Kamisaka, Toshio; Saito, Toranosuke; Kadomachi, Hironori
 PATENT ASSIGNEE(S): Sekisui Chemical Co. Ltd., Japan; Sanko Kaihatsu

SOURCE: Kagaku Kenyusho
 Jpn. Kokai Tokkyo Koho, 4 pp.
 CODEN: JKXXAF

DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 01299821	A	19891204	JP 1988-129178	19880526 <--
JP 08005950	B	19960124		

PRIORITY APPLN. INFO.: JP 1988-129178 19880526 <--

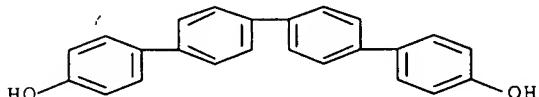
AB The title polymers are prepared by transesterifying polycarbonates with quaterphenyl derivs. $\text{AcO}(\text{CH}_2\text{CH}_2\text{O})_n(\text{p-C}_6\text{H}_4)_4(\text{OCH}_2\text{CH}_2)_n\text{OAc}$ (I; $n = 0-1$). The reaction of $\text{HO}(\text{p-C}_6\text{H}_4)_4\text{OH}$ with Ac_2O in sulfolane at 160° for 3 h gave I ($n = 0$) which (30 parts) was heated with 100 parts Panlite L 1225 at 350° in vacuo for 5 h to give a polymer having heat distortion temperature 229° , vs. 134° for Panlite L 1225.

IT 10508-41-5

RL: RCT (Reactant); RACT (Reactant or reagent)
 (esterification of, with acetic anhydride)

RN 10508-41-5 HCPLUS

CN [1,1':4',1'':4'',1'''-Quaterphenyl]-4,4'''-diol (9CI) (CA INDEX NAME)



L4 ANSWER 157 OF 161 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1990:200380 HCPLUS Full-text

DOCUMENT NUMBER: 112:200380

TITLE: P-Quaterphenyldiol-based polyester thermoplastic elastomers and articles made from them

INVENTOR(S): Niki, Akihiro; Ohsuga, Makoto; Uesaka, Toshio; Saito, Toranosuke; Tsunomachi, Hiroki; Doyama, Kazuo; Yamaguchi, Makoto; Kishimoto, Daishiro

PATENT ASSIGNEE(S): Sekisui Chemical Co. Ltd., Japan; Sanko Kaihatsu Kagaku Kenkyusho

SOURCE: Eur. Pat. Appl., 23 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

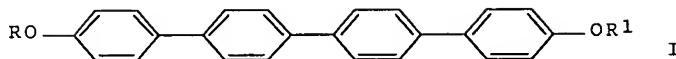
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 344099	A2	19891129	EP 1989-730128	19890525 <--
EP 344099	A3	19910123		
EP 344099	B1	19950412		
R: DE, FR, GB, IT, NL, SE				
AU 8935170	A	19891130	AU 1989-35170	19890525 <--
AU 619840	B2	19920206		
JP 02276817	A	19901113	JP 1989-133367	19890526 <--

JP 06045676	B	19940615		
CA 1335225	C	19950411	CA 1989-600829	19890526 <--
KR 9706673	B1	19970429	KR 1989-7084	19890526 <--
US 5191057	A	19930302	US 1991-804540	19911211 <--
US 5235024	A	19930810	US 1992-980841	19921124 <--
PRIORITY APPLN. INFO.:				
		JP 1988-129181	A	19880526 <--
		JP 1988-129182	A	19880526 <--
		JP 1988-216874	A	19880831 <--
		JP 1988-216876	A	19880831 <--
		JP 1989-15745	A	19890124 <--
		JP 1989-15748	A	19890124 <--
		US 1989-356726	B2	19890525 <--
		US 1989-438142	B1	19891120 <--
		US 1991-804540	A3	19911211 <--

GI



AB Heat-resistant polyester thermoplastic elastomers with excellent mech. properties are prepared from a dicarboxylic acid and diols including p-quaterphenyl derivative I (R, R1 = H, CH2CH2OH). Other polyesters containing I are highly crystalline with a liquid-crystal molten state, and are useful as engineering plastics. Thus, 0.10 mol I (R = R1 = H) (II) and 1.00 mol bis(2-hydroxyethyl) adipate (III) were heated at 280° for 2 h and at 280°/1 mm for 1 h to give a polyester showing m.p. 336°, tensile strength 232 kg/cm², elongation 1230%, tensile modulus 258 kg/cm², and Shore D hardness 37. A similar polyester elastomer prepared from III without II had m.p. 48°.

IT 126843-08-1P, Bisphenol A-4,4'''-dihydroxy-p-quaterphenyl-terephthaloyl dichloride copolymer 126843-09-2P, Bisphenol A-4,4'''-dihydroxy-p-quaterphenyl-isophthaloyl dichloride-terephthaloyl dichloride copolymer 126843-10-5P, 4,4'''-Dihydroxy-p-quaterphenyl-ethylene glycol-terephthalic acid copolymer 126843-17-2P

RL: PREP (Preparation)
(manufacture of heat-resistant, with anisotropic melt)

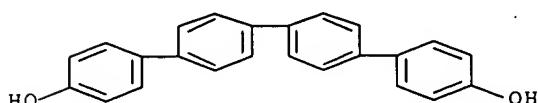
RN 126843-08-1 HCPLUS

CN 1,4-Benzenedicarbonyl dichloride, polymer with 4,4'-(1-methylethylidene)bis[phenol] and [1,1':4',1'':4'',1'''-quaterphenyl]-4,4'''-diol (9CI) (CA INDEX NAME)

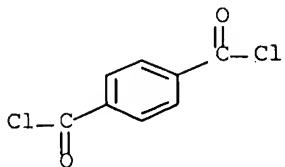
CM 1

CRN 10508-41-5

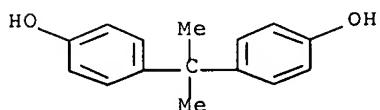
CMF C24 H18 O2



CM 2

CRN 100-20-9
CMF C8 H4 Cl2 O2

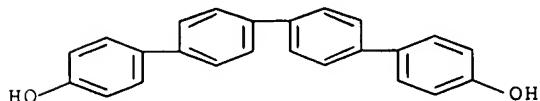
CM 3

CRN 80-05-7
CMF C15 H16 O2

RN 126843-09-2 HCAPLUS

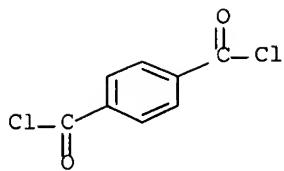
CN 1,3-Benzenedicarbonyl dichloride, polymer with 1,4-benzenedicarbonyl dichloride, 4,4'-(1-methylethylidene)bis[phenol] and [1,1':4',1'':4'',1'''-quaterphenyl]-4,4''-diol (9CI) (CA INDEX NAME)

CM 1

CRN 10508-41-5
CMF C24 H18 O2

CM 2

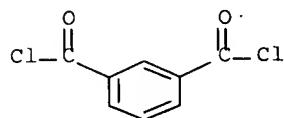
CRN 100-20-9
CMF C8 H4 Cl2 O2



CM 3

CRN 99-63-8

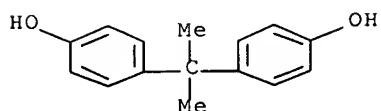
CMF C8 H4 Cl2 O2



CM 4

CRN 80-05-7

CMF C15 H16 O2



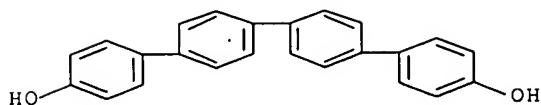
RN 126843-10-5 HCAPLUS

CN 1,4-Benzenedicarboxylic acid, polymer with 1,2-ethanediol and
[1,1':4',1'':4'',1''':4''',1''''-quaterphenyl]-4,4''''-diol (9CI) (CA INDEX NAME)

CM 1

CRN 10508-41-5

CMF C24 H18 O2



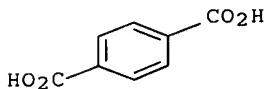
CM 2

CRN 107-21-1

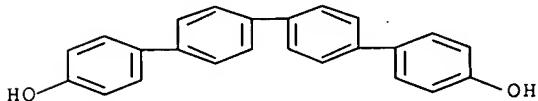
CMF C2 H6 O2

HO—CH₂—CH₂—OH

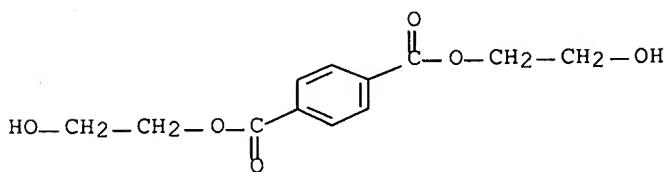
CM 3

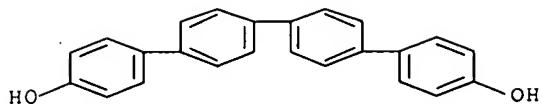
CRN 100-21-0
CMF C₈ H₆ O₄RN 126843-17-2 HCPLUS
CN 1,4-Benzenedicarboxylic acid, bis(2-hydroxyethyl) ester, polymer with
[1,1':4',1'':4'',1''':4''',1''''-quaterphenyl]-4,4''''-diol (9CI) (CA INDEX NAME)

CM 1

CRN 10508-41-5
CMF C₂₄ H₁₈ O₂

CM 2

CRN 959-26-2
CMF C₁₂ H₁₄ O₆IT 10508-41-5DP, 4,4''-Dihydroxy-p-quaterphenyl, polymers with
bis(hydroxyethyl) adipate and poly(dimethylsiloxane) 126843-01-4P
RL: PREP (Preparation)
(manufacture of high-melting)
RN 10508-41-5 HCPLUS
CN [1,1':4',1'':4'',1''':4''',1''''-Quaterphenyl]-4,4''''-diol (9CI) (CA INDEX NAME)



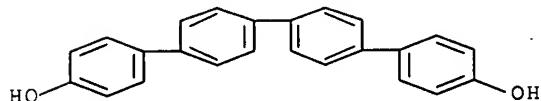
RN 126843-01-4 HCAPLUS

CN 1,4-Benzenedicarboxylic acid, dimethyl ester, polymer with 1,4-butanediol, dimethyl hexanedioate and [1,1':4',1'':4'',1'''-quaterphenyl]-4,4'''-diol (9CI) (CA INDEX NAME)

CM 1

CRN 10508-41-5

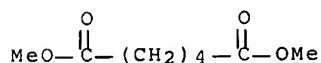
CMF C24 H18 O2



CM 2

CRN 627-93-0

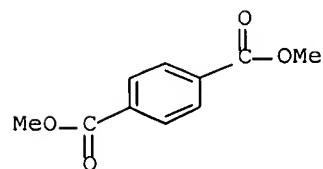
CMF C8 H14 O4



CM 3

CRN 120-61-6

CMF C10 H10 O4



CM 4

CRN 110-63-4

CMF C4 H10 O2

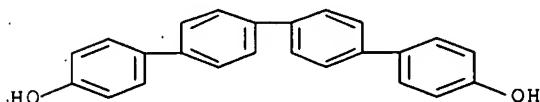
HO—(CH₂)₄—OH

IT 10508-41-5P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and ethoxylation of)

RN 10508-41-5 HCPLUS

CN [1,1':4',1'':4'',1''':-Quaterphenyl]-4,4''':-diol (9CI) (CA INDEX NAME)



IT 126842-95-3, Bis(2-hydroxyethyl) adipate-4,4''':-dihydroxy-p-
quaterphenyl copolymer 126842-96-4 126842-98-6
126842-99-7 126843-03-6

RL: USES (Uses)
(rubber, thermoplastic, manufacture of heat-resistant)

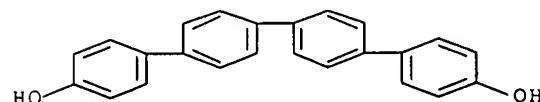
RN 126842-95-3 HCPLUS

CN Hexanedioic acid, bis(2-hydroxyethyl) ester, polymer with
[1,1':4',1'':4'',1''':-quaterphenyl]-4,4''':-diol (9CI) (CA INDEX NAME)

CM 1

CRN 10508-41-5

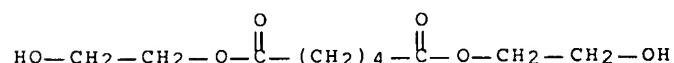
CMF C24 H18 O2



CM 2

CRN 1700-12-5

CMF C10 H18 O6



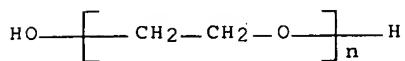
RN 126842-96-4 HCPLUS

CN Hexanedioic acid, bis(2-hydroxyethyl) ester, polymer with
α-hydro-ω-hydroxypoly(oxy-1,2-ethanediyl) and
[1,1':4',1'':4'',1''':-quaterphenyl]-4,4''':-diol, block (9CI) (CA INDEX NAME)

NAME)

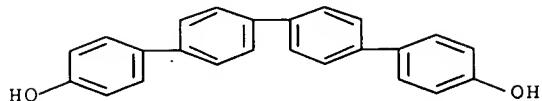
CM 1

CRN 25322-68-3
 CMF (C₂ H₄ O)_n H₂ O
 CCI PMS



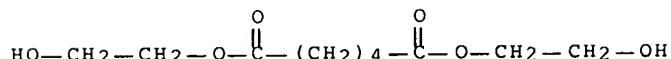
CM 2

CRN 10508-41-5
 CMF C₂₄ H₁₈ O₂



CM 3

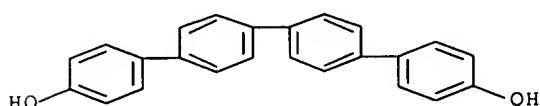
CRN 1700-12-5
 CMF C₁₀ H₁₈ O₆



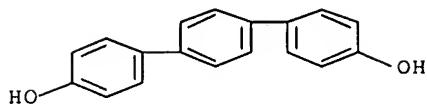
RN 126842-98-6 HCAPLUS
 CN Hexanedioic acid, bis(2-hydroxyethyl) ester, polymer with
 [1,1':4',1'':4'',1''':quaterphenyl]-4,4'''-diol and [1,1':4',1'':
 terphenyl]-4,4'''-diol (9CI) (CA INDEX NAME)

CM 1

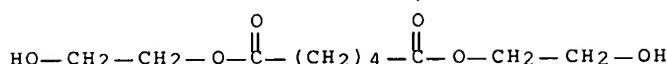
CRN 10508-41-5
 CMF C₂₄ H₁₈ O₂



CM 2

CRN 4084-45-1
CMF C18 H14 O2

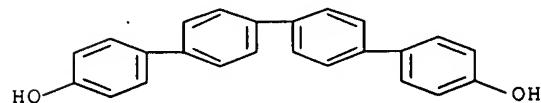
CM 3

CRN 1700-12-5
CMF C10 H18 O6

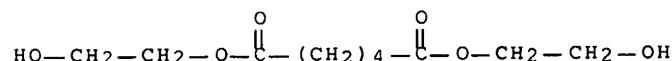
RN 126842-99-7 HCAPLUS

CN Hexanedioic acid, bis(2-hydroxyethyl) ester, polymer with 1,4-benzenediol and [1,1':4',1'':4'',1'''-quaterphenyl]-4,4'''-diol (9CI) (CA INDEX NAME)

CM 1

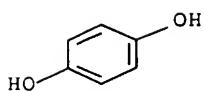
CRN 10508-41-5
CMF C24 H18 O2

CM 2

CRN 1700-12-5
CMF C10 H18 O6

CM 3

CRN 123-31-9
CMF C6 H6 O2



RN 126843-03-6 HCPLUS

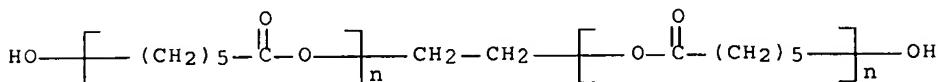
CN Hexanedioic acid, bis(2-hydroxyethyl) ester, polymer with
 $\alpha,\alpha'-1,2\text{-ethanediylbis}[\omega\text{-hydroxypoly}(\text{1-oxo-1,6-hexanediyl})]$ and $[1,1':4',1'':4'',1''':\text{quaterphenyl}]-4,4''\text{-diol}$, block
 (9CI) (CA INDEX NAME)

CM 1

CRN 59692-54-5

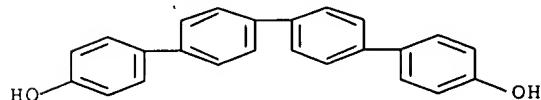
CMF (C₆ H₁₀ O₂)_n (C₆ H₁₀ O₂)_n C₂ H₆ O₂

CCI PMS



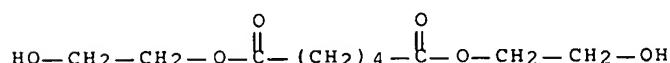
CM 2

CRN 10508-41-5

CMF C₂₄ H₁₈ O₂

CM 3

CRN 1700-12-5

CMF C₁₀ H₁₈ O₆

L4 ANSWER 158 OF 161 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1990:199905 HCPLUS Full-text

DOCUMENT NUMBER: 112:199905

TITLE: Moldable engineering plastics containing quaterphenyl derivatives

INVENTOR(S): Uesaka, Toshio; Niki, Akihiro; Ohsuga, Makoto; Saito, Toranosuke; Tsunomachi, Hiroki; Yamaguchi, Makoto; Doyama, Kazuo; Kishimoto, Daishiro

PATENT ASSIGNEE(S): Sekisui Chemical Co. Ltd., Japan; Sanko Kaihatsu Kagaku Kenkyusho

SOURCE: Eur. Pat. Appl., 44 pp.

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 343606	A1	19891129	EP 1989-109288	19890523 <--
EP 343606	B1	19950118		
R: DE, FR, GB, IT, NL, SE				
AU 8935070	A	19891130	AU 1989-35070	19890523 <--
AU 621887	B2	19920326		
US 5011879	A	19910430	US 1989-356725	19890525 <--
CA 1331900	C	19940906	CA 1989-600688	19890525 <--
JP 02276865	A	19901113	JP 1989-133371	19890526 <--
JP 07062091	B	19950705		
KR 9706903	B1	19970430	KR 1989-7083	19890526 <--
PRIORITY APPLN. INFO.:			JP 1988-129174	A 19880526 <--
			JP 1988-129175	A 19880526 <--
			JP 1988-129176	A 19880526 <--
			JP 1988-129177	A 19880526 <--
			JP 1988-216873	A 19880831 <--
			JP 1988-216875	A 19880831 <--
			JP 1988-304605	A 19881130 <--
			JP 1988-304606	A 19881130 <--
			JP 1988-304607	A 19881130 <--
			JP 1988-304608	A 19881130 <--
			JP 1989-15682	A 19890125 <--

OTHER SOURCE(S): MARPAT 112:199905

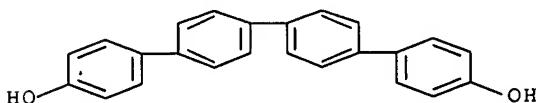
AB The title compns., with good flow, heat resistance, and mech. properties, contain 0.1-15 phr p-quarterphenyl or substituted derivative. Thus, Ultem 1000 (polyether-polyimide) containing 5 phr 4,4'''-p-quarterphenyldiol (I) had melt viscosity at 340° 6300 P, tensile modulus 32,000 kg/cm², and tensile strength 1100 kg/cm²; vs. 12,000, 3100, and 1080, resp., without I.

IT 10508-41-5

RL: USES (Uses)
(flow improvers, for plastic moldings)

RN 10508-41-5 HCPLUS

CN [1,1':4',1'':4'',1'''-Quaterphenyl]-4,4'''-diol (9CI) (CA INDEX NAME)



L4 ANSWER 159 OF 161 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1967:454802 HCPLUS Full-text

DOCUMENT NUMBER: 67:54802

TITLE: Photo- and thermostabilization of polyamides

INVENTOR(S): Tokareva, L. G.; Mikhailov, N. V.; Potemkina, Z. I.;
 Borik, A. G.; Nagdaseva, I. P.

PATENT ASSIGNEE(S): All-Union Scientific-Research Institute of Synthetic
 Fibers

SOURCE: U.S.S.R. From: Izobret., Prom. Obraztsy, Tovarnye
 Znaki 1966, 43(18), 103.

CODEN: URXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Russian

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
SU 186124		19660912	SU	19630315 <--

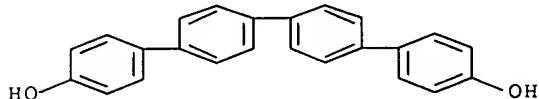
AB Polyamides are photo- and thermostabilized by introduction of p,p'-dihydroxydiphenyl or p,p'-dihydroxyquaterphenyl as stabilizer. The discoloring of polyamide articles is thus prevented.

IT 10508-41-5

RL: USES (Uses)
 (as stabilizer for nylon)

RN 10508-41-5 HCPLUS

CN [1,1':4',1'':4'',1''':Quaterphenyl]-4,4'''-diol (9CI) (CA INDEX NAME)



L4 ANSWER 160 OF 161 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1966:430224 HCPLUS Full-text

DOCUMENT NUMBER: 65:30224

ORIGINAL REFERENCE NO.: 65:5630a-b

TITLE: Ultraviolet light-polarizing films

INVENTOR(S): Blout, Elkan R.; Bird, George R.

PATENT ASSIGNEE(S): Polaroid Corp.

SOURCE: 2 pp.

DOCUMENT TYPE: Patent

LANGUAGE: Unavailable

FAMILY ACC. NUM. COUNT: 1

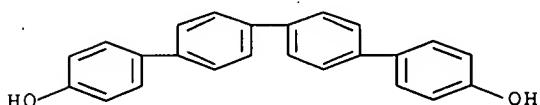
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3254562		19660607	US 1961-147756	19611026 <--

AB The following p,p'-dihydroxypolyphenyls are uv polarizers with high dichroic ratios: biphenyl, terphenyl, quaterphenyl, 4,4'- dihydroxybiphenyl, 4,4'''-dihydroxyterphenyl (I), 4,4'''- dihydroxyquaterphenyl, and 3,5-dichlorobiphenyl. Thus, a film of poly(vinyl alc.) (about 2 mils) was stretched to .apprx.4 times its initial length and immersed in a staining bath, consisting of a saturated solution of I in 1:20 Me2CO-H2O. The soaked film was restretched to 110% of its initial stretched length, air-dried, and slightly baked. The resulting polarizer had a dichroic ratio of about 6-8 in the 300 ±40 mp spectral region.

IT 10508-41-5, p-Quaterphenyl-4,4'''-diol

(vinyl acetate polymers treated and, as ultraviolet-light polarizer)
 RN 10508-41-5 HCPLUS
 CN [1,1':4',1'':4'',1''':-Quaterphenyl]-4,4'''-diol (9CI) (CA INDEX NAME)



L4 ANSWER 161 OF 161 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1941:4524 HCPLUS Full-text

DOCUMENT NUMBER: 35:4524

ORIGINAL REFERENCE NO.: 35:737f-i,738a-d

TITLE: Quaterphenyl. I. Some dihydroxy derivatives

AUTHOR(S): Harley-Mason, John; Mann, Frederick G.

SOURCE: Journal of the Chemical Society (1940)

1379-85

CODEN: JCSOA9; ISSN: 0368-1769

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

AB 4-IC₆H₄C₆H₄OMe-4 (8 g.) and 5 g. Cu bronze, heated in a N atmospheric for 1 hr. at 280°, give 4,4'''-dimethoxyquaterphenyl (I), 4-MeOC₆H₄(C₆H₄)₂C₆H₄OMe-4 (this system of numbering the substituents differs from that used by C. A. in the Third Decennial Index), m. 335-8°; the yield is less on heating in air. I also results from 4-MeOC₆H₄C₆H₄MgBr (prepared with the use of EtMgBr) in C₆H₆ by boiling with anhydrous CuCl₂ for 3 hrs. (2.9 g. from 10 g. Br derivative). CrO₃ oxidation of I gives (4-HO₂CC₆H₄)₂ in 85% yields. Boiling I with HI in AcOH at 180° for 4 hrs. and acetylation give the 4,4'''-di-Ac derivative, m. 325° (decomposition), of 4,4'''-dihydroxyquaterphenyl (II), m. 419-22°; the EtOH-KOH solution has a marked greenish blue fluorescence. II has no estrogenic activity. (ClCH₂CO)₂O gives the di(chloroacetoxy) derivative, decomp. 360°. II could not be oxidized by PbO₂, SeO₂ or CrO₃ in C₅H₅N; in AcOH CrO₃ gives a nearly quant. yield of (p-HO₂CC₆H₄)₂; the reaction was rather more rapid than with I. Addition of 10.8 g. of Cu bronze to 39 g. of 4-IC₆H₄C₆H₄NO₂-4 at 240° and heating 6 hrs. at 235-45° with occasional shaking, give 3.2 g. of 4,4'''-dinitroquaterphenyl (III), yellow, m. 317-20° (after sublimation at 320° and 0.01 mm.). Direct nitration of Ph(C₆H₄)₂Ph (IV) either produced unchanged IV or a mixture of poly-NO₂ derivs. Oxidation of III with CrO₃ gives 4-nitrobi-phenyl-4'-carboxylic acid, m. 338-40°, thus differing in the method of cleavage from I and II. Passing dry HCl through 2.7 g. of III and 12 g. SnCl₂ in 200 cc. boiling AcOH for 5 hrs., decomposition of the product with 20% aqueous NaOH and sublimation at 310-20° and 0.01 mm., yield the 4,4'''-di-NH₂ derivative, m. 312-15° (decomposition); di-Ac derivative, decomp. 385°; the diazo reaction in H₂SO₄ gives II; the yield makes the method inferior to the use of I. (4-AcNH₂C₆H₄)₂ (10 g.) in Ac₂O-AcOH and N₂O₃ fumes give after 4.5 hrs. 9 g. of N,N'-bisnitrosoacetylbenzidine, yellow, explodes at 84-7°; reaction with PhOMe did not give the expected I, nor could it be prepared from (XN₂C₆H₄)₂ with PhOMe. Reaction of 4-BrC₆H₄N₂Cl (from 215 g. amine) with excess of PhOMe gives 64 g. of 4'-bromo-2-methoxybiphenyl (V), m. 62-3°, and 22 g. of 4-BrC₆H₄C₆H₄OMe-4 (VI), which may be separated by steam distillation; similarly 217 g. 4-IC₆H₄N₂Cl gives 27 g. of 4'-iodo-2-methoxybiphenyl (VII), m. 61-3°, 4-IC₆H₄C₆H₄OMe-4 and some p-C₆H₄I₂ 4'-O₂NC₆H₄C₆H₄OH-2 yields an Ac derivative, m. 142-5°; the 2-Me ether b30 235-40°, m. 62-4°; reduction of the latter with Fe in 70% EtOH containing a little AcOH gives 4'-amino-2-methoxybiphenyl, analyzed as the HCl salt and the Ac derivative, m. 147-8°. The diazo reaction with CuBr gives V or with KI

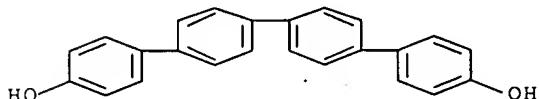
in dilute H₂SO₄ VII. V (4 g.) and Cu bronze in a N atmospheric (1 hr. at 280°) give 1.5 g. of 2,2'''-dimethoxyquaterphenyl (VIII), m. 188-9°, which is also prepared through the Grignard reagent; boiling with HI in AcOH gives the 2,2'''-di-HO derivative (IX), m. 238-40°; di-Ac derivative, m. 221-4°; di(chloroacetoxy) derivative, m. 166-9°; di-o-nitrobenzoyl derivative, m. 190-2°. The Grignard reagent from a mixture of V and VI, boiled with CuCl₂, gives a mixture of I, VIII and 2,4'''-dimethoxyquaterphenyl (X), m. 223-4°; X is less soluble in most solvents than VIII and much more soluble than I; VIII was extracted with boiling EtOHC₆H₆ (2: 1) and X was separated from I by extraction with PhMe. The solns. of X have a marked violet fluorescence. 2,4'''-Dihydroxyquaterphenyl, m. 268-70°; di-Ac derivative, m. 189-92°; di(chloroacetoxy) derivative, m. 158-60°; di-o-nitrobenzoyl derivative, m. 206-8°. Oxidation of IX and X and the Me ethers gives (4-HO₂CC₆H₄)₂.

IT 10508-41-5P, 4,4'''-p-Quaterphenyldiol

RL: PREP (Preparation)
(preparation of)

RN 10508-41-5 HCPLUS

CN [1,1':4',1'':4'',1'''-Quaterphenyl]-4,4'''-diol (9CI) (CA INDEX NAME)



SEARCH HISTORY

Search performed on 7 January 2007, completed on 8 January 2007:

=> d his

(FILE 'HOME' ENTERED AT 16:22:35 ON 07 JAN 2007)

FILE 'HCAPLUS' ENTERED AT 16:22:51 ON 07 JAN 2007
E SATOMI KOUJI/AU

L1 4 S E3
E OONO HIROYASU/AU
L2 31 S E3
E EKAWA KENJI/AU
L3 9 S E3
L4 1 S L1 AND L2 AND L3
SELECT RN L4 1-1

FILE 'REGISTRY' ENTERED AT 16:23:31 ON 07 JAN 2007

L5 14 S E1-14

FILE 'HCAPLUS' ENTERED AT 16:23:36 ON 07 JAN 2007

L6 1 S L4 AND L5

FILE 'REGISTRY' ENTERED AT 16:24:28 ON 07 JAN 2007

L7 STR
L8 4 S L7
L9 161 S L7 FUL

FILE 'HCAPLUS' ENTERED AT 16:27:39 ON 07 JAN 2007

L10 162 S L9
L11 161 S L10 AND (PRD<20050929 OR PD<20050929)
L12 4 S L11 AND METHOD

FILE 'REGISTRY' ENTERED AT 16:29:41 ON 07 JAN 2007

L13 STR L7
L14 0 S L13
L15 0 S L13 FUL
L16 STR L13
L17 0 S L16
L18 STR L16
L19 0 S L18
L20 0 S L11 AND (?THERM? OR ?HEAT?)

FILE 'HCAPLUS' ENTERED AT 16:43:33 ON 07 JAN 2007

L21 121 S L11 AND (?THERM? OR ?HEAT?)
L22 2 S L21 AND ?ALKALI?(3A)?CATALYST?

FILE 'REGISTRY' ENTERED AT 16:44:11 ON 07 JAN 2007

SAV L7 GAL358L7/L

FILE 'HCAPLUS' ENTERED AT 16:45:56 ON 07 JAN 2007

SAV L11 GAL358L11/A

FILE 'REGISTRY' ENTERED AT 16:47:00 ON 07 JAN 2007

L23 STRUCTURE 256345-96-7
L24 0 S L23
L25 4 S L23 FUL

10/531,358

FILE 'HCAPLUS' ENTERED AT 16:47:52 ON 07 JAN 2007

L26 2 S L25

L27 2 S L26 AND (PRD<20050929 OR PD<20050929)

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(FILE 'HOME' ENTERED AT 11:14:14 ON 08 JAN 2007)

FILE 'HCAPLUS' ENTERED AT 11:14:40 ON 08 JAN 2007

ACT GAL358L11/A

L1 STR

L2 (161)SEA SSS FUL L1

L3 (162)SEA ABB=ON L2

L4 161 SEA ABB=ON L3. AND (PRD<20050929 OR PD<20050929) (** cit's 142-161
printed and included, herewith; all 161 cits have been saved)

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FILE HCAPLUS

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